

GW - 001

## REPORTS

RCRA Group 9  
(SWMU12 API Separator, 13  
Process Area, 14 Tanks 3-5  
& 27 WW Collection System)  
(3)

February 2015



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

October 17, 2014

Kelly Robinson

Western Refining Southwest, Inc.  
#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409B75

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/24/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



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

## Case Narrative

WO#: 1409B75  
Date: 10/17/2014

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**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

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Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B75**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:15:00 PM

**Lab ID:** 1409B75-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 360    | 110      |      | mg/Kg-dry | 10 | 9/29/2014 12:27:53 PM | 15526                |
| Motor Oil Range Organics (MRO)                 | 780    | 530      |      | mg/Kg-dry | 10 | 9/29/2014 12:27:53 PM | 15526                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/29/2014 12:27:53 PM | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 14     | 3.3      |      | mg/Kg-dry | 1  | 9/26/2014 10:29:18 PM | R21487               |
| Surr: BFB                                      | 164    | 80-120   | S    | %REC      | 1  | 9/26/2014 10:29:18 PM | R21487               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 7.5    | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.62   | 0.18     |      | mg/Kg-dry | 5  | 10/9/2014 2:29:21 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Arsenic                                        | 4.3    | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Barium                                         | 210    | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Beryllium                                      | 0.42   | 0.16     |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Cadmium                                        | 0.23   | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Chromium                                       | 19     | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Cobalt                                         | 4.3    | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Lead                                           | 8.9    | 0.26     |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Nickel                                         | 16     | 0.52     |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Vanadium                                       | 31     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:33:12 PM  | 15559                |
| Zinc                                           | 160    | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 12:40:06 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |
| Acenaphthylene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |
| Aniline                                        | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |
| Anthracene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |
| Azobenzene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |
| Benz(a)anthracene                              | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |
| Benzoic acid                                   | ND     | 5.4      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |
| Benzyl alcohol                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM  | 15483                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:15:00 PM

**Lab ID:** 1409B75-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Butyl benzyl phthalate                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Carbazole                              | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 4-Chloroaniline                        | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 2-Chloronaphthalene                    | ND     | 2.7 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 2-Chlorophenol                         | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Chrysene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Di-n-butyl phthalate                   | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Di-n-octyl phthalate                   | ND     | 4.3 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Dibenzofuran                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.7 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Diethyl phthalate                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Dimethyl phthalate                     | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 4.3 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 3.3 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Fluoranthene                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Fluorene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Hexachlorobenzene                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Hexachlorobutadiene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Hexachloroethane                       | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| Isophorone                             | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 1-Methylnaphthalene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |
| 2-Methylnaphthalene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-10 (0-0.5')

Project: GROUP 9

Collection Date: 9/19/2014 3:15:00 PM

Lab ID: 1409B75-001

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 5.4       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| 3+4-Methylphenol                       | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| N-Nitrosodi-n-propylamine              | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| N-Nitrosodiphenylamine                 | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Naphthalene                            | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| 2-Nitroaniline                         | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| 3-Nitroaniline                         | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| 4-Nitroaniline                         | ND      | 4.3       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Nitrobenzene                           | ND      | 5.4       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| 2-Nitrophenol                          | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| 4-Nitrophenol                          | ND      | 2.7       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Pentachlorophenol                      | ND      | 4.3       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Phenanthrene                           | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Phenol                                 | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Pyrene                                 | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Pyridine                               | ND      | 5.4       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| 1,2,4-Trichlorobenzene                 | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| 2,4,5-Trichlorophenol                  | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| 2,4,6-Trichlorophenol                  | ND      | 2.2       |      | mg/Kg-dry | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Surr: 2-Fluorophenol                   | 96.7    | 21-111    |      | %REC      | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Surr: Phenol-d5                        | 104     | 23.1-117  |      | %REC      | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Surr: 2,4,6-Tribromophenol             | 39.1    | 22.7-88.9 |      | %REC      | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Surr: Nitrobenzene-d5                  | 106     | 24.5-126  |      | %REC      | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Surr: 2-Fluorobiphenyl                 | 107     | 21.2-129  |      | %REC      | 1  | 9/26/2014 3:01:58 AM | 15483         |
| Surr: 4-Terphenyl-d14                  | 94.0    | 39.4-107  |      | %REC      | 1  | 9/26/2014 3:01:58 AM | 15483         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | 0.00311 | 0.00176   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Toluene                                | ND      | 0.00176   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Ethylbenzene                           | ND      | 0.00176   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Xylenes, Total                         | ND      | 0.00176   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00176   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,2,4-Trimethylbenzene                 | ND      | 0.00176   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00176   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00176   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00176   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Naphthalene                            | ND      | 0.00176   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1-Methylnaphthalene                    | ND      | 0.00352   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 2-Methylnaphthalene                    | ND      | 0.00352   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Acetone                                | 0.0164  | 0.00880   |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:15:00 PM

**Lab ID:** 1409B75-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Bromodichloromethane                   | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Bromoform                              | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Bromomethane                           | ND     | 0.00264 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 2-Butanone                             | ND     | 0.00880 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Carbon tetrachloride                   | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Chlorobenzene                          | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Chloroethane                           | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Chloroform                             | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Chloromethane                          | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 2-Chlorotoluene                        | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Carbon disulfide                       | ND     | 0.00880 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 4-Chlorotoluene                        | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| cis-1,2-DCE                            | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| cis-1,3-Dichloropropene                | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Dibromochloromethane                   | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Dibromomethane                         | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,2-Dichlorobenzene                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,3-Dichlorobenzene                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,4-Dichlorobenzene                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Dichlorodifluoromethane                | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,1-Dichloroethane                     | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,1-Dichloroethene                     | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,2-Dichloropropane                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,3-Dichloropropane                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 2,2-Dichloropropane                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 1,1-Dichloropropene                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Hexachlorobutadiene                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Isopropylbenzene                       | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 4-Isopropyltoluene                     | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Methylene chloride                     | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| n-Butylbenzene                         | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 2-Hexanone                             | ND     | 0.00880 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| n-Propylbenzene                        | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| sec-Butylbenzene                       | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| Styrene                                | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| 4-Methyl-2-pentanone                   | ND     | 0.00880 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |
| tert-Butylbenzene                      | ND     | 0.00176 |      | mg/Kg-dry | 1  | 9/25/2014 2:27:23 PM | 15499         |

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

|                    |                                                   |                                                      |              |
|--------------------|---------------------------------------------------|------------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    | Page 5 of 32 |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |              |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |              |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |              |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |              |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:15:00 PM

**Lab ID:** 1409B75-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF            | Date Analyzed        | Batch |
|----------------------------------------|--------|----------|------|-----------|---------------|----------------------|-------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           | Analyst: cadg |                      |       |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| Tetrachloroethene (PCE)                | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| trans-1,2-DCE                          | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| trans-1,3-Dichloropropene              | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| 1,1,1-Trichloroethane                  | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| 1,1,2-Trichloroethane                  | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| Trichloroethene (TCE)                  | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| Trichlorofluoromethane                 | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| 1,2,3-Trichloropropane                 | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| Vinyl chloride                         | ND     | 0.00176  |      | mg/Kg-dry | 1             | 9/25/2014 2:27:23 PM | 15499 |
| Surr: 1,2-Dichloroethane-d4            | 110    | 70-130   |      | %REC      | 1             | 9/25/2014 2:27:23 PM | 15499 |
| Surr: 4-Bromofluorobenzene             | 116    | 65.3-135 |      | %REC      | 1             | 9/25/2014 2:27:23 PM | 15499 |
| Surr: Dibromofluoromethane             | 110    | 70-130   |      | %REC      | 1             | 9/25/2014 2:27:23 PM | 15499 |
| Surr: Toluene-d8                       | 105    | 70-130   |      | %REC      | 1             | 9/25/2014 2:27:23 PM | 15499 |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 32 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B75**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:30:00 PM

**Lab ID:** 1409B75-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 220    | 11       |      | mg/Kg-dry | 1  | 9/29/2014 12:49:30 PM | 15526                |
| Motor Oil Range Organics (MRO)                 | 330    | 56       |      | mg/Kg-dry | 1  | 9/29/2014 12:49:30 PM | 15526                |
| Surr: DNOP                                     | 112    | 57.9-140 |      | %REC      | 1  | 9/29/2014 12:49:30 PM | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 8.3    | 3.3      |      | mg/Kg-dry | 1  | 9/26/2014 10:59:29 PM | R21487               |
| Surr: BFB                                      | 135    | 80-120   | S    | %REC      | 1  | 9/26/2014 10:59:29 PM | R21487               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 11     | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.035    |      | mg/Kg-dry | 1  | 10/2/2014 12:51:43 PM | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Arsenic                                        | 2.8    | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Barium                                         | 160    | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Beryllium                                      | 0.51   | 0.17     |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Chromium                                       | 6.8    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Cobalt                                         | 4.8    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Lead                                           | 5.5    | 0.28     |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Nickel                                         | 8.4    | 0.55     |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Vanadium                                       | 22     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:34:31 PM  | 15559                |
| Zinc                                           | 32     | 2.8      |      | mg/Kg-dry | 1  | 10/2/2014 12:41:23 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |
| Benzoic acid                                   | ND     | 0.56     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM  | 15483                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:30:00 PM

**Lab ID:** 1409B75-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 4-Chloroaniline                        | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.33 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| Isophorone                             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:30:00 PM

**Lab ID:** 1409B75-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND     | 0.56      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| 3+4-Methylphenol                       | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| N-Nitrosodi-n-propylamine              | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| N-Nitrosodiphenylamine                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Naphthalene                            | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| 2-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| 3-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| 4-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Nitrobenzene                           | ND     | 0.56      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| 2-Nitrophenol                          | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| 4-Nitrophenol                          | ND     | 0.28      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Pentachlorophenol                      | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Phenanthrene                           | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Phenol                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Pyrene                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Pyridine                               | ND     | 0.56      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| 2,4,5-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| 2,4,6-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Surr: 2-Fluorophenol                   | 73.3   | 21-111    |      | %REC      | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Surr: Phenol-d5                        | 73.8   | 23.1-117  |      | %REC      | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Surr: 2,4,6-Tribromophenol             | 48.4   | 22.7-88.9 |      | %REC      | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Surr: Nitrobenzene-d5                  | 76.4   | 24.5-126  |      | %REC      | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Surr: 2-Fluorobiphenyl                 | 72.8   | 21.2-129  |      | %REC      | 1  | 9/26/2014 2:06:17 AM | 15483         |
| Surr: 4-Terphenyl-d14                  | 65.7   | 39.4-107  |      | %REC      | 1  | 9/26/2014 2:06:17 AM | 15483         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | ND     | 0.00177   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Toluene                                | ND     | 0.00177   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Ethylbenzene                           | ND     | 0.00177   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Xylenes, Total                         | ND     | 0.00177   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00177   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00177   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00177   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00177   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00177   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Naphthalene                            | ND     | 0.00177   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1-Methylnaphthalene                    | ND     | 0.00355   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 2-Methylnaphthalene                    | ND     | 0.00355   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Acetone                                | 0.0512 | 0.00887   |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 9 of 32 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-10 (0.5-2')

Project: GROUP 9

Collection Date: 9/19/2014 3:30:00 PM

Lab ID: 1409B75-002

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Bromodichloromethane                   | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Bromoform                              | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Bromomethane                           | ND     | 0.00266 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 2-Butanone                             | 0.0135 | 0.00887 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Carbon tetrachloride                   | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Chlorobenzene                          | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Chloroethane                           | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Chloroform                             | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Chloromethane                          | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 2-Chlorotoluene                        | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Carbon disulfide                       | ND     | 0.00887 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 4-Chlorotoluene                        | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| cis-1,2-DCE                            | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| cis-1,3-Dichloropropene                | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Dibromochloromethane                   | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Dibromomethane                         | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,2-Dichlorobenzene                    | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,3-Dichlorobenzene                    | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,4-Dichlorobenzene                    | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Dichlorodifluoromethane                | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,1-Dichloroethane                     | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,1-Dichloroethene                     | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,2-Dichloropropane                    | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,3-Dichloropropane                    | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 2,2-Dichloropropane                    | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 1,1-Dichloropropene                    | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Hexachlorobutadiene                    | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Isopropylbenzene                       | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 4-Isopropyltoluene                     | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Methylene chloride                     | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| n-Butylbenzene                         | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 2-Hexanone                             | ND     | 0.00887 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| n-Propylbenzene                        | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| sec-Butylbenzene                       | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| Styrene                                | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| 4-Methyl-2-pentanone                   | ND     | 0.00887 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |
| tert-Butylbenzene                      | ND     | 0.00177 |      | mg/Kg-dry | 1  | 9/25/2014 2:56:09 PM | 15499         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-10 (0.5-2')

Project: GROUP 9

Collection Date: 9/19/2014 3:30:00 PM

Lab ID: 1409B75-002

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL       | Qual | Units         | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|----------|------|---------------|----|----------------------|-------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      | Analyst: cadg |    |                      |       |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| Tetrachloroethene (PCE)                | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| trans-1,2-DCE                          | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| trans-1,3-Dichloropropene              | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| 1,1,1-Trichloroethane                  | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| 1,1,2-Trichloroethane                  | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| Trichloroethene (TCE)                  | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| Trichlorofluoromethane                 | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| 1,2,3-Trichloropropane                 | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| Vinyl chloride                         | ND     | 0.00177  |      | mg/Kg-dry     | 1  | 9/25/2014 2:56:09 PM | 15499 |
| Surr: 1,2-Dichloroethane-d4            | 103    | 70-130   |      | %REC          | 1  | 9/25/2014 2:56:09 PM | 15499 |
| Surr: 4-Bromofluorobenzene             | 105    | 65.3-135 |      | %REC          | 1  | 9/25/2014 2:56:09 PM | 15499 |
| Surr: Dibromofluoromethane             | 96.6   | 70-130   |      | %REC          | 1  | 9/25/2014 2:56:09 PM | 15499 |
| Surr: Toluene-d8                       | 97.1   | 70-130   |      | %REC          | 1  | 9/25/2014 2:56:09 PM | 15499 |

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

|             |   |                                                 |    |                                                    |               |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 11 of 32 |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B75**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:40:00 PM

**Lab ID:** 1409B75-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 450    | 10       |      | mg/Kg-dry | 1  | 9/29/2014 1:11:11 PM  | 15526                |
| Motor Oil Range Organics (MRO)                 | 62     | 52       |      | mg/Kg-dry | 1  | 9/29/2014 1:11:11 PM  | 15526                |
| Surr: DNOP                                     | 126    | 57.9-140 |      | %REC      | 1  | 9/29/2014 1:11:11 PM  | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 52     | 35       |      | mg/Kg-dry | 10 | 9/26/2014 11:29:39 PM | R21487               |
| Surr: BFB                                      | 157    | 80-120   | S    | %REC      | 10 | 9/26/2014 11:29:39 PM | R21487               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 4.1    | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.032    |      | mg/Kg-dry | 1  | 10/2/2014 12:53:30 PM | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Barium                                         | 200    | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Chromium                                       | 5.0    | 0.30     |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Cobalt                                         | 4.3    | 0.30     |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Lead                                           | 1.4    | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Nickel                                         | 3.5    | 0.50     |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Vanadium                                       | 24     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:35:49 PM  | 15559                |
| Zinc                                           | 15     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 12:42:39 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:40:00 PM

**Lab ID:** 1409B75-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Fluorene                               | 0.25   | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 1-Methylnaphthalene                    | 1.5    | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |
| 2-Methylnaphthalene                    | 2.4    | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM | 15483        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-10 (24-26')

Project: GROUP 9

Collection Date: 9/19/2014 3:40:00 PM

Lab ID: 1409B75-003

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Naphthalene                            | 0.69   | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Phenanthrene                           | 0.43   | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Surr: 2-Fluorophenol                   | 66.8   | 21-111    |      | %REC      | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Surr: Phenol-d5                        | 74.3   | 23.1-117  |      | %REC      | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Surr: 2,4,6-Tribromophenol             | 71.6   | 22.7-88.9 |      | %REC      | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Surr: Nitrobenzene-d5                  | 80.8   | 24.5-126  |      | %REC      | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Surr: 2-Fluorobiphenyl                 | 73.3   | 21.2-129  |      | %REC      | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| Surr: 4-Terphenyl-d14                  | 76.2   | 39.4-107  |      | %REC      | 1  | 9/25/2014 7:08:25 PM  | 15483        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                       | Analyst: RAA |
| Benzene                                | ND     | 0.35      |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Toluene                                | ND     | 0.35      |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Ethylbenzene                           | ND     | 0.35      |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.35      |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.35      |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.35      |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.35      |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.35      |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Naphthalene                            | 1.2    | 0.70      |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1-Methylnaphthalene                    | 2.2    | 1.4       |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 2-Methylnaphthalene                    | 3.6    | 1.4       |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Acetone                                | ND     | 5.2       |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Bromobenzene                           | ND     | 0.35      |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:40:00 PM

**Lab ID:** 1409B75-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                       | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Bromoform                          | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Bromomethane                       | ND     | 1.0  |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 2-Butanone                         | ND     | 3.5  |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Carbon disulfide                   | ND     | 3.5  |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Carbon tetrachloride               | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Chlorobenzene                      | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Chloroethane                       | ND     | 0.70 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Chloroform                         | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Chloromethane                      | ND     | 1.0  |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 2-Chlorotoluene                    | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 4-Chlorotoluene                    | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| cis-1,2-DCE                        | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| cis-1,3-Dichloropropene            | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.70 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Dibromochloromethane               | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Dibromomethane                     | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,2-Dichlorobenzene                | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,3-Dichlorobenzene                | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,4-Dichlorobenzene                | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Dichlorodifluoromethane            | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,1-Dichloroethane                 | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,1-Dichloroethene                 | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,2-Dichloropropane                | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,3-Dichloropropane                | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 2,2-Dichloropropane                | ND     | 0.70 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,1-Dichloropropene                | ND     | 0.70 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Hexachlorobutadiene                | ND     | 0.70 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 2-Hexanone                         | ND     | 3.5  |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Isopropylbenzene                   | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 4-Isopropyltoluene                 | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 4-Methyl-2-pentanone               | ND     | 3.5  |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Methylene chloride                 | ND     | 1.0  |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| n-Butylbenzene                     | ND     | 1.0  |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| n-Propylbenzene                    | 0.82   | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| sec-Butylbenzene                   | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| Styrene                            | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| tert-Butylbenzene                  | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.35 |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:40:00 PM

**Lab ID:** 1409B75-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed         | Batch               |
|------------------------------------|--------|--------|------|-----------|----|-----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                       | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.35   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| Tetrachloroethene (PCE)            | ND     | 0.35   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| trans-1,2-DCE                      | ND     | 0.35   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| trans-1,3-Dichloropropene          | ND     | 0.35   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| 1,2,3-Trichlorobenzene             | ND     | 0.70   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| 1,2,4-Trichlorobenzene             | ND     | 0.35   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| 1,1,1-Trichloroethane              | ND     | 0.35   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| 1,1,2-Trichloroethane              | ND     | 0.35   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| Trichloroethene (TCE)              | ND     | 0.35   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| Trichlorofluoromethane             | ND     | 0.35   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| 1,2,3-Trichloropropane             | ND     | 0.70   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| Vinyl chloride                     | ND     | 0.35   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| Xylenes, Total                     | ND     | 0.70   |      | mg/Kg-dry | 10 | 9/29/2014 11:29:19 PM | 15551               |
| Surr: Dibromofluoromethane         | 75.2   | 70-130 |      | %REC      | 10 | 9/29/2014 11:29:19 PM | 15551               |
| Surr: 1,2-Dichloroethane-d4        | 85.2   | 70-130 |      | %REC      | 10 | 9/29/2014 11:29:19 PM | 15551               |
| Surr: Toluene-d8                   | 93.0   | 70-130 |      | %REC      | 10 | 9/29/2014 11:29:19 PM | 15551               |
| Surr: 4-Bromofluorobenzene         | 103    | 70-130 |      | %REC      | 10 | 9/29/2014 11:29:19 PM | 15551               |

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

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B75**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:50:00 PM

**Lab ID:** 1409B75-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 450    | 10       |      | mg/Kg-dry | 1  | 9/29/2014 1:32:50 PM  | 15526                |
| Motor Oil Range Organics (MRO)                 | ND     | 52       |      | mg/Kg-dry | 1  | 9/29/2014 1:32:50 PM  | 15526                |
| Surr: DNOP                                     | 107    | 57.9-140 |      | %REC      | 1  | 9/29/2014 1:32:50 PM  | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 44     | 9.8      |      | mg/Kg-dry | 2  | 9/29/2014 11:33:15 AM | 15551                |
| Surr: BFB                                      | 397    | 80-120   | S    | %REC      | 2  | 9/29/2014 11:33:15 AM | 15551                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 3.4    | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.035    |      | mg/Kg-dry | 1  | 10/2/2014 12:55:19 PM | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Barium                                         | 200    | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Beryllium                                      | 0.16   | 0.15     |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Chromium                                       | 5.2    | 0.30     |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Cobalt                                         | 3.4    | 0.30     |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Lead                                           | 4.0    | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Nickel                                         | 2.6    | 0.51     |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Vanadium                                       | 18     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:37:05 PM  | 15559                |
| Zinc                                           | 15     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 12:43:56 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:50:00 PM

**Lab ID:** 1409B75-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Fluorene                               | 0.40   | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 1-Methylnaphthalene                    | 2.0    | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |
| 2-Methylnaphthalene                    | 2.9    | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM | 15483        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:50:00 PM

**Lab ID:** 1409B75-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Naphthalene                            | 0.85   | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Phenanthrene                           | 0.66   | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Surr: 2-Fluorophenol                   | 74.2   | 21-111    |      | %REC      | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Surr: Phenol-d5                        | 80.3   | 23.1-117  |      | %REC      | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Surr: 2,4,6-Tribromophenol             | 68.2   | 22.7-88.9 |      | %REC      | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Surr: Nitrobenzene-d5                  | 87.2   | 24.5-126  |      | %REC      | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Surr: 2-Fluorobiphenyl                 | 68.3   | 21.2-129  |      | %REC      | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| Surr: 4-Terphenyl-d14                  | 76.6   | 39.4-107  |      | %REC      | 1  | 9/25/2014 7:36:20 PM  | 15483        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                       | Analyst: RAA |
| Benzene                                | ND     | 0.49      |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| Toluene                                | ND     | 0.49      |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| Ethylbenzene                           | ND     | 0.49      |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.49      |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.49      |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.49      |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.49      |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.49      |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| Naphthalene                            | 1.6    | 0.98      |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| 1-Methylnaphthalene                    | 3.1    | 2.0       |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| 2-Methylnaphthalene                    | 5.6    | 2.0       |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| Acetone                                | ND     | 7.4       |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |
| Bromobenzene                           | ND     | 0.49      |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-10 (26-28')

Project: GROUP 9

Collection Date: 9/19/2014 3:50:00 PM

Lab ID: 1409B75-004

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF           | Date Analyzed         | Batch |
|------------------------------------|--------|------|------|-----------|--------------|-----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           | Analyst: RAA |                       |       |
| Bromodichloromethane               | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Bromoform                          | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Bromomethane                       | ND     | 1.5  |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 2-Butanone                         | ND     | 4.9  |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Carbon disulfide                   | ND     | 4.9  |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Carbon tetrachloride               | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Chlorobenzene                      | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Chloroethane                       | ND     | 0.98 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Chloroform                         | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Chloromethane                      | ND     | 1.5  |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 2-Chlorotoluene                    | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 4-Chlorotoluene                    | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| cis-1,2-DCE                        | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| cis-1,3-Dichloropropene            | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.98 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Dibromochloromethane               | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Dibromomethane                     | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 1,2-Dichlorobenzene                | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 1,3-Dichlorobenzene                | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 1,4-Dichlorobenzene                | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Dichlorodifluoromethane            | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 1,1-Dichloroethane                 | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 1,1-Dichloroethene                 | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 1,2-Dichloropropane                | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 1,3-Dichloropropane                | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 2,2-Dichloropropane                | ND     | 0.98 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 1,1-Dichloropropene                | ND     | 0.98 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Hexachlorobutadiene                | ND     | 0.98 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 2-Hexanone                         | ND     | 4.9  |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Isopropylbenzene                   | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 4-Isopropyltoluene                 | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 4-Methyl-2-pentanone               | ND     | 4.9  |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Methylene chloride                 | ND     | 1.5  |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| n-Butylbenzene                     | ND     | 1.5  |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| n-Propylbenzene                    | 0.61   | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| sec-Butylbenzene                   | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| Styrene                            | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| tert-Butylbenzene                  | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.49 |      | mg/Kg-dry | 10           | 9/29/2014 11:57:08 PM | 15551 |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B75

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-10 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 3:50:00 PM

**Lab ID:** 1409B75-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed         | Batch               |
|------------------------------------|--------|--------|------|-----------|----|-----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                       | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.49   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| Tetrachloroethene (PCE)            | ND     | 0.49   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| trans-1,2-DCE                      | ND     | 0.49   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| trans-1,3-Dichloropropene          | ND     | 0.49   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| 1,2,3-Trichlorobenzene             | ND     | 0.98   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| 1,2,4-Trichlorobenzene             | ND     | 0.49   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| 1,1,1-Trichloroethane              | ND     | 0.49   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| 1,1,2-Trichloroethane              | ND     | 0.49   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| Trichloroethene (TCE)              | ND     | 0.49   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| Trichlorofluoromethane             | ND     | 0.49   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| 1,2,3-Trichloropropane             | ND     | 0.98   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| Vinyl chloride                     | ND     | 0.49   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| Xylenes, Total                     | ND     | 0.98   |      | mg/Kg-dry | 10 | 9/29/2014 11:57:08 PM | 15551               |
| Surr: Dibromofluoromethane         | 72.9   | 70-130 |      | %REC      | 10 | 9/29/2014 11:57:08 PM | 15551               |
| Surr: 1,2-Dichloroethane-d4        | 83.9   | 70-130 |      | %REC      | 10 | 9/29/2014 11:57:08 PM | 15551               |
| Surr: Toluene-d8                   | 89.0   | 70-130 |      | %REC      | 10 | 9/29/2014 11:57:08 PM | 15551               |
| Surr: 4-Bromofluorobenzene         | 93.3   | 70-130 |      | %REC      | 10 | 9/29/2014 11:57:08 PM | 15551               |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 21 of 32 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |



# Anatek Labs, Inc.

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

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

**Batch #:** 140925065  
**Project Name:** 1409B75

## Analytical Results Report

|                  |                                   |                 |           |                    |           |           |           |
|------------------|-----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140925065-001                     | Sampling Date   | 9/19/2014 | Date/Time Received | 9/25/2014 | 12:50 PM  |           |
| Client Sample ID | 1409B75-001C / SWMU 13-10 (0-0.5) |                 |           | Sampling Time      | 3:15 PM   |           |           |
| Matrix           | Soil                              | Sample Location |           |                    |           |           |           |
| Comments         |                                   |                 |           |                    |           |           |           |
|                  |                                   |                 |           |                    |           |           |           |
| Parameter        | Result                            | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                                | mg/Kg           | 0.248     | 10/3/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 7                                 | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

|                  |                                   |                 |           |                    |           |           |           |
|------------------|-----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140925065-002                     | Sampling Date   | 9/19/2014 | Date/Time Received | 9/25/2014 | 12:50 PM  |           |
| Client Sample ID | 1409B75-002C / SWMU 13-10 (0.5-2) |                 |           | Sampling Time      | 3:30 PM   |           |           |
| Matrix           | Soil                              | Sample Location |           |                    |           |           |           |
| Comments         |                                   |                 |           |                    |           |           |           |
|                  |                                   |                 |           |                    |           |           |           |
| Parameter        | Result                            | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                                | mg/Kg           | 0.252     | 10/3/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 10.9                              | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

|                  |                                   |                 |           |                    |           |           |           |
|------------------|-----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140925065-003                     | Sampling Date   | 9/19/2014 | Date/Time Received | 9/25/2014 | 12:50 PM  |           |
| Client Sample ID | 1409B75-003C / SWMU 13-10 (24-26) |                 |           | Sampling Time      | 3:40 PM   |           |           |
| Matrix           | Soil                              | Sample Location |           |                    |           |           |           |
| Comments         |                                   |                 |           |                    |           |           |           |
|                  |                                   |                 |           |                    |           |           |           |
| Parameter        | Result                            | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                                | mg/Kg           | 0.236     | 10/3/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 4                                 | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

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

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

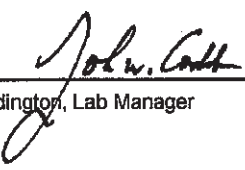
**Batch #:** 140925065  
**Project Name:** 1409B75

## Analytical Results Report

|                         |                                   |                        |           |                           |                    |
|-------------------------|-----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140925065-004                     | <b>Sampling Date</b>   | 9/19/2014 | <b>Date/Time Received</b> | 9/25/2014 12:50 PM |
| <b>Client Sample ID</b> | 1409B75-004C / SWMU 13-10 (26-28) |                        |           | <b>Sampling Time</b>      | 3:50 PM            |
| <b>Matrix</b>           | Soil                              | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                   |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.238 | 10/3/2014     | CRW     | EPA 335.4 |           |
| %moisture | 3.6    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

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

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

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

Monday, October 13, 2014

Page 2 of 2

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

**Batch #:** 140925065  
**Project Name:** 1409B75

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|---------|-----------|---------------|
| Cyanide   | 0.489      | mg/kg | 0.5       | 97.8 | 90-110  | 10/2/2014 | 10/3/2014     |

### Matrix Spike

| Sample Number  | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|----------------|-----------|---------------|-----------|-------|----------|------|---------|-----------|---------------|
| 140925060-001A | Cyanide   | ND            | 12.6      | mg/kg | 13.1     | 96.2 | 90-110  | 10/2/2014 | 10/3/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 12.5       | mg/kg | 13.1      | 95.4 | 0.8  | 0-25    | 10/2/2014 | 10/3/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/2/2014 | 10/3/2014     |

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

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:Cert0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871089

Monday, October 13, 2014

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B75

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID <b>5ML RB</b>       | SampType: <b>MBLK</b>           |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|-------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21487</b>         |     | RunNo: <b>21487</b>                               |             |                     |          |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/26/2014</b> |     | SeqNo: <b>628754</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |                                                   |             |                     |          |           |      |          |      |
| Surr: BFB                     | 820                             |     | 1000                                              |             | 82.2                | 80       | 120       |      |          |      |

| Sample ID <b>2.5UG GRO LCS</b> | SampType: <b>LCS</b>            |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|--------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>         | Batch ID: <b>R21487</b>         |     | RunNo: <b>21487</b>                               |             |                     |          |           |      |          |      |
| Prep Date:                     | Analysis Date: <b>9/26/2014</b> |     | SeqNo: <b>628755</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                        | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)  | 23                              | 5.0 | 25.00                                             | 0           | 90.8                | 65.8     | 139       |      |          |      |
| Surr: BFB                      | 900                             |     | 1000                                              |             | 90.4                | 80       | 120       |      |          |      |

| Sample ID <b>MB-15551</b>     | SampType: <b>MBLK</b>           |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|-------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>15551</b>          |     | RunNo: <b>21502</b>                               |             |                     |          |           |      |          |      |
| Prep Date: <b>9/26/2014</b>   | Analysis Date: <b>9/28/2014</b> |     | SeqNo: <b>628928</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |                                                   |             |                     |          |           |      |          |      |
| Surr: BFB                     | 900                             |     | 1000                                              |             | 89.7                | 80       | 120       |      |          |      |

| Sample ID <b>LCS-15551</b>    | SampType: <b>LCS</b>            |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|-------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>        | Batch ID: <b>15551</b>          |     | RunNo: <b>21502</b>                               |             |                     |          |           |      |          |      |
| Prep Date: <b>9/26/2014</b>   | Analysis Date: <b>9/28/2014</b> |     | SeqNo: <b>628929</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26                              | 5.0 | 25.00                                             | 0           | 105                 | 65.8     | 139       |      |          |      |
| Surr: BFB                     | 940                             |     | 1000                                              |             | 94.5                | 80       | 120       |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B75

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |       |                          |             |      |                                       |           |              |          |      |
|--------------------------------|-----------|-------|--------------------------|-------------|------|---------------------------------------|-----------|--------------|----------|------|
| Sample ID                      | mb-15551  |       | SampType: MBLK           |             |      | TestCode: EPA Method 8260B: Volatiles |           |              |          |      |
| Client ID:                     | PBS       |       | Batch ID: 15551          |             |      | RunNo: 21541                          |           |              |          |      |
| Prep Date:                     | 9/26/2014 |       | Analysis Date: 9/29/2014 |             |      | SeqNo: 630669                         |           | Units: mg/Kg |          |      |
| Analyte                        | Result    | PQL   | SPK value                | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD         | RPDLimit | Qual |
| Benzene                        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Toluene                        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Ethylbenzene                   | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Naphthalene                    | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |
| 1-Methylnaphthalene            | ND        | 0.20  |                          |             |      |                                       |           |              |          |      |
| 2-Methylnaphthalene            | ND        | 0.20  |                          |             |      |                                       |           |              |          |      |
| Acetone                        | ND        | 0.75  |                          |             |      |                                       |           |              |          |      |
| Bromobenzene                   | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Bromodichloromethane           | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Bromoform                      | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Bromomethane                   | ND        | 0.15  |                          |             |      |                                       |           |              |          |      |
| 2-Butanone                     | ND        | 0.50  |                          |             |      |                                       |           |              |          |      |
| Carbon disulfide               | ND        | 0.50  |                          |             |      |                                       |           |              |          |      |
| Carbon tetrachloride           | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Chlorobenzene                  | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Chloroethane                   | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |
| Chloroform                     | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Chloromethane                  | ND        | 0.15  |                          |             |      |                                       |           |              |          |      |
| 2-Chlorotoluene                | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 4-Chlorotoluene                | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| cis-1,2-DCE                    | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |
| Dibromochloromethane           | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Dibromomethane                 | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Dichlorodifluoromethane        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,1-Dichloroethane             | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,1-Dichloroethene             | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dichloropropane            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,3-Dichloropropane            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 2,2-Dichloropropane            | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B75

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID                   | <b>mb-15551</b>  |       | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
|-----------------------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Client ID:                  | <b>PBS</b>       |       | Batch ID:      | <b>15551</b>     |      | RunNo:    | <b>21541</b>                       |      |                     |      |
| Prep Date:                  | <b>9/26/2014</b> |       | Analysis Date: | <b>9/29/2014</b> |      | SeqNo:    | <b>630669</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| 1,1-Dichloropropene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 2-Hexanone                  | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Isopropylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Methylene chloride          | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Butylbenzene              | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Propylbenzene             | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| sec-Butylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Styrene                     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| tert-Butylbenzene           | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,2-DCE               | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Vinyl chloride              | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Xylenes, Total              | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.38             |       | 0.5000         |                  | 75.6 | 70        | 130                                |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.40             |       | 0.5000         |                  | 79.4 | 70        | 130                                |      |                     |      |
| Surr: Toluene-d8            | 0.44             |       | 0.5000         |                  | 88.0 | 70        | 130                                |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.42             |       | 0.5000         |                  | 84.7 | 70        | 130                                |      |                     |      |

| Sample ID     | <b>lcs-15551</b> |       | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
|---------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Client ID:    | <b>LCSS</b>      |       | Batch ID:      | <b>15551</b>     |      | RunNo:    | <b>21541</b>                       |      |                     |      |
| Prep Date:    | <b>9/26/2014</b> |       | Analysis Date: | <b>9/29/2014</b> |      | SeqNo:    | <b>630670</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| Benzene       | 0.99             | 0.050 | 1.000          | 0                | 99.1 | 70        | 130                                |      |                     |      |
| Toluene       | 0.97             | 0.050 | 1.000          | 0                | 96.6 | 70        | 130                                |      |                     |      |
| Chlorobenzene | 0.99             | 0.050 | 1.000          | 0                | 98.8 | 70        | 130                                |      |                     |      |

### Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B75

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                             |           |       |                          |             |                                       |          |              |      |          |      |
|-----------------------------|-----------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | lcs-15551 |       | SampType: LCS            |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                  | LCSS      |       | Batch ID: 15551          |             | RunNo: 21541                          |          |              |      |          |      |
| Prep Date:                  | 9/26/2014 |       | Analysis Date: 9/29/2014 |             | SeqNo: 630670                         |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL   | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.94      | 0.050 | 1.000                    | 0           | 93.8                                  | 60.5     | 160          |      |          |      |
| Trichloroethene (TCE)       | 0.90      | 0.050 | 1.000                    | 0           | 90.3                                  | 58.8     | 139          |      |          |      |
| Surr: Dibromofluoromethane  | 0.38      |       | 0.5000                   |             | 75.8                                  | 70       | 130          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.41      |       | 0.5000                   |             | 81.3                                  | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.45      |       | 0.5000                   |             | 89.9                                  | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.39      |       | 0.5000                   |             | 77.4                                  | 70       | 130          |      |          |      |

|                             |                    |      |                          |             |                                       |          |                  |      |          |      |
|-----------------------------|--------------------|------|--------------------------|-------------|---------------------------------------|----------|------------------|------|----------|------|
| Sample ID                   | 1409b75-004ams     |      | SampType: MS             |             | TestCode: EPA Method 8260B: Volatiles |          |                  |      |          |      |
| Client ID:                  | SWMU 13-10 (26-28' |      | Batch ID: 15551          |             | RunNo: 21541                          |          |                  |      |          |      |
| Prep Date:                  | 9/26/2014          |      | Analysis Date: 9/30/2014 |             | SeqNo: 630673                         |          | Units: mg/Kg-dry |      |          |      |
| Analyte                     | Result             | PQL  | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Benzene                     | 0.98               | 0.49 | 0.9867                   | 0           | 99.2                                  | 32.2     | 145              |      |          |      |
| Toluene                     | 0.91               | 0.49 | 0.9867                   | 0           | 91.7                                  | 29.1     | 139              |      |          |      |
| Chlorobenzene               | 0.93               | 0.49 | 0.9867                   | 0           | 94.3                                  | 32.4     | 142              |      |          |      |
| 1,1-Dichloroethene          | 0.77               | 0.49 | 0.9867                   | 0           | 78.0                                  | 32.6     | 155              |      |          |      |
| Trichloroethene (TCE)       | 1.0                | 0.49 | 0.9867                   | 0           | 101                                   | 29.2     | 150              |      |          |      |
| Surr: Dibromofluoromethane  | 4.1                |      | 4.934                    |             | 82.6                                  | 70       | 130              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 4.6                |      | 4.934                    |             | 92.4                                  | 70       | 130              |      |          |      |
| Surr: Toluene-d8            | 4.2                |      | 4.934                    |             | 85.7                                  | 70       | 130              |      |          |      |
| Surr: 4-Bromofluorobenzene  | 4.5                |      | 4.934                    |             | 91.8                                  | 70       | 130              |      |          |      |

|                             |                    |      |                          |             |                                       |          |                  |       |          |      |
|-----------------------------|--------------------|------|--------------------------|-------------|---------------------------------------|----------|------------------|-------|----------|------|
| Sample ID                   | 1409b75-004amsd    |      | SampType: MSD            |             | TestCode: EPA Method 8260B: Volatiles |          |                  |       |          |      |
| Client ID:                  | SWMU 13-10 (26-28' |      | Batch ID: 15551          |             | RunNo: 21541                          |          |                  |       |          |      |
| Prep Date:                  | 9/26/2014          |      | Analysis Date: 9/30/2014 |             | SeqNo: 630674                         |          | Units: mg/Kg-dry |       |          |      |
| Analyte                     | Result             | PQL  | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit        | %RPD  | RPDLimit | Qual |
| Benzene                     | 0.89               | 0.49 | 0.9839                   | 0           | 90.1                                  | 32.2     | 145              | 9.92  | 20       |      |
| Toluene                     | 0.93               | 0.49 | 0.9839                   | 0           | 94.1                                  | 29.1     | 139              | 2.22  | 20       |      |
| Chlorobenzene               | 0.94               | 0.49 | 0.9839                   | 0           | 95.2                                  | 32.4     | 142              | 0.717 | 20       |      |
| 1,1-Dichloroethene          | 0.75               | 0.49 | 0.9839                   | 0           | 76.4                                  | 32.6     | 155              | 2.25  | 20       |      |
| Trichloroethene (TCE)       | 0.87               | 0.49 | 0.9839                   | 0           | 88.6                                  | 29.2     | 150              | 13.6  | 20       |      |
| Surr: Dibromofluoromethane  | 3.7                |      | 4.920                    |             | 74.9                                  | 70       | 130              | 0     | 0        |      |
| Surr: 1,2-Dichloroethane-d4 | 4.0                |      | 4.920                    |             | 80.5                                  | 70       | 130              | 0     | 0        |      |
| Surr: Toluene-d8            | 4.3                |      | 4.920                    |             | 88.4                                  | 70       | 130              | 0     | 0        |      |
| Surr: 4-Bromofluorobenzene  | 4.8                |      | 4.920                    |             | 96.9                                  | 70       | 130              | 0     | 0        |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B75

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |         |                          |             |                                           |          |              |      |          |      |
|--------------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15499  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                     | PBS       |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                     | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627937                             |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Toluene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Xylenes, Total                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| Acetone                        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromoform                      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromomethane                   | ND        | 0.00300 |                          |             |                                           |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroform                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloromethane                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B75

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15499  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | PBS       |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627937                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 2,2-Dichloropropane         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloropropene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Hexachlorobutadiene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Isopropylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Isopropyltoluene          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methylene chloride          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| n-Butylbenzene              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Hexanone                  | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| n-Propylbenzene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| sec-Butylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Styrene                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Methyl-2-pentanone        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| tert-Butylbenzene           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Tetrachloroethene (PCE)     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,2-DCE               | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,3-Dichloropropene   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichloroethene (TCE)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichlorofluoromethane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichloropropane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Vinyl chloride              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0207    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0235    |         | 0.02000                  |             | 117                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0206    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0199    |         | 0.02000                  |             | 99.7                                      | 70       | 130          |      |          |      |

|               |           |         |                          |             |                                           |          |              |      |          |      |
|---------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID     | LCS-15499 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:    | LCSS      |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:    | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627939                             |          | Units: mg/Kg |      |          |      |
| Analyte       | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Toluene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Chlorobenzene | 0.0103    | 0.00200 | 0.01000                  | 0           | 103                                       | 70       | 130          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B75

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15499 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | LCSS      |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627939                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.00912   | 0.00200 | 0.01000                  | 0           | 91.2                                      | 70       | 130          |      |          |      |
| Trichloroethene (TCE)       | 0.00988   | 0.00200 | 0.01000                  | 0           | 98.8                                      | 61.6     | 131          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0213    |         | 0.02000                  |             | 107                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0228    |         | 0.02000                  |             | 114                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0201    |         | 0.02000                  |             | 101                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0201    |         | 0.02000                  |             | 100                                       | 70       | 130          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B75

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15483  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15483          |             | RunNo: 21456                              |          |              |      |          |      |
| Prep Date:                  | 9/24/2014 |      | Analysis Date: 9/25/2014 |             | SeqNo: 627716                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |                                           |          |              |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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

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

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B75

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15483  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 15483     | RunNo:      | 21456                           |          |           |      |          |      |
| Prep Date:                 | 9/24/2014 | Analysis Date: | 9/25/2014 | SeqNo:      | 627716                          | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 2.2       |                | 3.330     |             | 66.7                            | 21       | 111       |      |          |      |
| Surr: Phenol-d5            | 2.2       |                | 3.330     |             | 67.5                            | 23.1     | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.9       |                | 3.330     |             | 57.0                            | 22.7     | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5      | 1.2       |                | 1.670     |             | 72.7                            | 24.5     | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.1       |                | 1.670     |             | 67.2                            | 21.2     | 129       |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |                | 1.670     |             | 77.9                            | 39.4     | 107       |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B75

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | lcs-15483 |      | SampType: LCS            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15483          |             |      | RunNo: 21456                              |           |              |          |      |
| Prep Date:                 | 9/24/2014 |      | Analysis Date: 9/25/2014 |             |      | SeqNo: 627717                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Acenaphthene               | 1.2       | 0.20 | 1.670                    | 0           | 71.4 | 50.7                                      | 110       |              |          |      |
| 4-Chloro-3-methylphenol    | 2.7       | 0.50 | 3.330                    | 0           | 81.5 | 47.8                                      | 107       |              |          |      |
| 2-Chlorophenol             | 2.7       | 0.20 | 3.330                    | 0           | 80.1 | 45.7                                      | 108       |              |          |      |
| 1,4-Dichlorobenzene        | 1.1       | 0.20 | 1.670                    | 0           | 66.3 | 46.1                                      | 112       |              |          |      |
| 2,4-Dinitrotoluene         | 0.99      | 0.50 | 1.670                    | 0           | 59.0 | 44.9                                      | 114       |              |          |      |
| N-Nitrosodi-n-propylamine  | 1.1       | 0.20 | 1.670                    | 0           | 67.0 | 38.7                                      | 128       |              |          |      |
| 4-Nitrophenol              | 2.3       | 0.25 | 3.330                    | 0           | 69.5 | 40.2                                      | 103       |              |          |      |
| Pentachlorophenol          | 1.6       | 0.40 | 3.330                    | 0           | 48.2 | 32.9                                      | 94        |              |          |      |
| Phenol                     | 2.6       | 0.20 | 3.330                    | 0           | 78.0 | 44.1                                      | 109       |              |          |      |
| Pyrene                     | 1.3       | 0.20 | 1.670                    | 0           | 76.5 | 51.9                                      | 109       |              |          |      |
| 1,2,4-Trichlorobenzene     | 1.1       | 0.20 | 1.670                    | 0           | 64.9 | 49.5                                      | 115       |              |          |      |
| Surr: 2-Fluorophenol       | 2.4       |      | 3.330                    |             | 71.4 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.5       |      | 3.330                    |             | 75.3 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.3       |      | 3.330                    |             | 68.4 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |      | 1.670                    |             | 77.7 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 75.7 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.5       |      | 1.670                    |             | 87.6 | 39.4                                      | 107       |              |          |      |

### Qualifiers:

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

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

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B75

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | MB-15593  |       | SampType: MBLK           |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | PBS       |       | Batch ID: 15593          |             | RunNo: 21606                       |          |              |      |          |      |
| Prep Date: | 9/29/2014 |       | Analysis Date: 10/2/2014 |             | SeqNo: 633786                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercurv    | ND        | 0.033 |                          |             |                                    |          |              |      |          |      |

|            |           |       |           |                |           |          |           |                          |          |        |       |
|------------|-----------|-------|-----------|----------------|-----------|----------|-----------|--------------------------|----------|--------|-------|
| Sample ID  | LCS-15593 |       |           | SampType:      | LCS       |          | TestCode: | EPA Method 7471: Mercury |          |        |       |
| Client ID: | LCSS      |       |           | Batch ID:      | 15593     |          | RunNo:    | 21606                    |          |        |       |
| Prep Date: | 9/29/2014 |       |           | Analysis Date: | 10/2/2014 |          | SeqNo:    | 633787                   |          | Units: | mg/Kg |
| Analyte    | Result    | PQL   | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD                     | RPDLimit | Qual   |       |
| Mercury    | 0.17      | 0.033 | 0.1667    | 0              | 104       | 80       | 120       |                          |          |        |       |

|            |           |       |                |             |      |           |                          |      |              |      |  |
|------------|-----------|-------|----------------|-------------|------|-----------|--------------------------|------|--------------|------|--|
| Sample ID  | MB-15805  |       | SampType:      | MBLK        |      | TestCode: | EPA Method 7471: Mercury |      |              |      |  |
| Client ID: | PBS       |       | Batch ID:      | 15805       |      | RunNo:    | 21806                    |      |              |      |  |
| Prep Date: | 10/8/2014 |       | Analysis Date: | 10/9/2014   |      | SeqNo:    | 640877                   |      | Units: mg/Kg |      |  |
| Analyte    | Result    | PQL   | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                | %RPD | RPDLimit     | Qual |  |
| Mercury    | ND        | 0.031 |                |             |      |           |                          |      |              |      |  |

|            |                     |      |                          |             |                                    |          |                  |      |          |      |
|------------|---------------------|------|--------------------------|-------------|------------------------------------|----------|------------------|------|----------|------|
| Sample ID  | 1409B75-001BMS      |      | SampType: MS             |             | TestCode: EPA Method 7471: Mercury |          |                  |      |          |      |
| Client ID: | SWMU 13-10 (0-0.5') |      | Batch ID: 15805          |             | RunNo: 21806                       |          |                  |      |          |      |
| Prep Date: | 10/8/2014           |      | Analysis Date: 10/9/2014 |             | SeqNo: 640919                      |          | Units: mg/Kg-dry |      |          |      |
| Analyte    | Result              | PQL  | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Mercury    | 0.70                | 0.17 | 0.1717                   | 0.6182      | 49.5                               | 75       | 125              |      |          | S    |

|            |                     |      |                          |             |                                    |          |                  |      |          |      |
|------------|---------------------|------|--------------------------|-------------|------------------------------------|----------|------------------|------|----------|------|
| Sample ID  | 1409B75-001BMSD     |      | SampType: MSD            |             | TestCode: EPA Method 7471: Mercury |          |                  |      |          |      |
| Client ID: | SWMU 13-10 (0-0.5') |      | Batch ID: 15805          |             | RunNo: 21806                       |          |                  |      |          |      |
| Prep Date: | 10/8/2014           |      | Analysis Date: 10/9/2014 |             | SeqNo: 640922                      |          | Units: mg/Kg-dry |      |          |      |
| Analyte    | Result              | PQL  | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Mercury    | 0.72                | 0.19 | 0.1884                   | 0.6182      | 52.2                               | 75       | 125              | 1.88 | 20       | S    |

|            |           |       |           |                |           |          |           |                          |          |        |       |
|------------|-----------|-------|-----------|----------------|-----------|----------|-----------|--------------------------|----------|--------|-------|
| Sample ID  | LCS-15805 |       |           | SampType:      | LCS       |          | TestCode: | EPA Method 7471: Mercury |          |        |       |
| Client ID: | LCSS      |       |           | Batch ID:      | 15805     |          | RunNo:    | 21806                    |          |        |       |
| Prep Date: | 10/8/2014 |       |           | Analysis Date: | 10/9/2014 |          | SeqNo:    | 641056                   |          | Units: | mg/Kg |
| Analyte    | Result    | PQL   | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD                     | RPDLimit | Qual   |       |
| Mercury    | 0.17      | 0.033 | 0.1667    | 0              | 102       | 80       | 120       |                          |          |        |       |

### Qualifiers:

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



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

## Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409B75

RcptNo: 1

Received by/date:

LM 09/24/14

Logged By: Anne Thorne

9/24/2014 8:30:00 AM

Anne Thorne

Completed By: Anne Thorne

9/24/2014

Anne Thorne

Reviewed By:

AS

09/24/14

### Chain of Custody

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

### Log In

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

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

### Special Handling (if applicable)

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

Person Notified:

Date

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.1                     | Good      | Yes         |         |           |           |



# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                    | Analytical Method              |
|----------------------------|--------------------------------|
| Antimony                   | SW-846 method 6010/6020        |
| Arsenic                    | SW-846 method 6010/6020        |
| Barium                     | SW-846 method 6010/6020        |
| Beryllium                  | SW-846 method 6010/6020        |
| Cadmium                    | SW-846 method 6010/6020        |
| Chromium                   | SW-846 method 6010/6020        |
| <del>Chromium VI</del>     | <del>SW-846 Method 8060A</del> |
| Cobalt                     | SW-846 method 6010/6020        |
| Cyanide                    | SW-846 method 335.4/335.2 mod  |
| Lead                       | SW-846 method 6010/6020        |
| <del>Tetraethyl lead</del> | <del>SW-846 method 8270C</del> |
| Mercury                    | SW-846 method 7470/7471        |
| Nickel                     | SW-846 method 6010/6020        |
| Selenium                   | SW-846 method 6010/6020        |
| Silver                     | SW-846 method 6010/6020        |
| Vanadium                   | SW-846 method 6010/6020        |
| Zinc                       | SW-846 method 6010/6020        |



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October 17, 2014

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409B77

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/24/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



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

## Case Narrative

WO#: 1409B77  
Date: 10/17/2014

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**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

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Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B77**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:25:00 PM

**Lab ID:** 1409B77-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units                | DF | Date Analyzed         | Batch  |
|------------------------------------------------|--------|----------|------|----------------------|----|-----------------------|--------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      | Analyst: <b>BCN</b>  |    |                       |        |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry            | 1  | 9/29/2014 1:54:26 PM  | 15526  |
| Motor Oil Range Organics (MRO)                 | ND     | 57       |      | mg/Kg-dry            | 1  | 9/29/2014 1:54:26 PM  | 15526  |
| Surr: DNOP                                     | 105    | 57.9-140 |      | %REC                 | 1  | 9/29/2014 1:54:26 PM  | 15526  |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      | Analyst: <b>NSB</b>  |    |                       |        |
| Gasoline Range Organics (GRO)                  | ND     | 3.2      |      | mg/Kg-dry            | 1  | 9/26/2014 11:59:47 PM | R21487 |
| Surr: BFB                                      | 88.7   | 80-120   |      | %REC                 | 1  | 9/26/2014 11:59:47 PM | R21487 |
| <b>PERCENT MOISTURE</b>                        |        |          |      | Analyst: <b>cadg</b> |    |                       |        |
| Percent Moisture                               | 12     | 1.0      |      | wt%                  | 1  | 9/24/2014 3:09:00 PM  | R21448 |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      | Analyst: <b>MMD</b>  |    |                       |        |
| Mercury                                        | ND     | 0.038    |      | mg/Kg-dry            | 1  | 10/7/2014 12:02:05 PM | 15733  |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      | Analyst: <b>ELS</b>  |    |                       |        |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Arsenic                                        | 3.2    | 2.8      |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Barium                                         | 160    | 0.11     |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Beryllium                                      | 0.50   | 0.17     |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Chromium                                       | 6.6    | 0.33     |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Cobalt                                         | 4.9    | 0.33     |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Lead                                           | 4.5    | 0.28     |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Nickel                                         | 6.7    | 0.56     |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Vanadium                                       | 25     | 2.8      |      | mg/Kg-dry            | 1  | 10/1/2014 1:38:27 PM  | 15559  |
| Zinc                                           | 29     | 2.8      |      | mg/Kg-dry            | 1  | 10/2/2014 12:45:10 PM | 15559  |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      | Analyst: <b>JDC</b>  |    |                       |        |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |
| Benzoic acid                                   | ND     | 0.57     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/25/2014 8:04:09 PM  | 15483  |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-1 (0.5-2')

Project: GROUP 9

Collection Date: 9/22/2014 12:25:00 PM

Lab ID: 1409B77-001

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 4-Chloroaniline                        | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.46 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.46 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| Isophorone                             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 1-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |
| 2-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:25:00 PM

**Lab ID:** 1409B77-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 0.57      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| 3+4-Methylphenol                       | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| N-Nitrosodi-n-propylamine              | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| N-Nitrosodiphenylamine                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Naphthalene                            | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| 2-Nitroaniline                         | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| 3-Nitroaniline                         | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| 4-Nitroaniline                         | ND      | 0.46      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Nitrobenzene                           | ND      | 0.57      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| 2-Nitrophenol                          | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| 4-Nitrophenol                          | ND      | 0.29      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Pentachlorophenol                      | ND      | 0.46      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Phenanthrene                           | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Phenol                                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Pyrene                                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Pyridine                               | ND      | 0.57      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| 2,4,5-Trichlorophenol                  | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| 2,4,6-Trichlorophenol                  | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Surr: 2-Fluorophenol                   | 56.4    | 21-111    |      | %REC      | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Surr: Phenol-d5                        | 59.6    | 23.1-117  |      | %REC      | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Surr: 2,4,6-Tribromophenol             | 51.2    | 22.7-88.9 |      | %REC      | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Surr: Nitrobenzene-d5                  | 56.4    | 24.5-126  |      | %REC      | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Surr: 2-Fluorobiphenyl                 | 59.4    | 21.2-129  |      | %REC      | 1  | 9/25/2014 8:04:09 PM | 15483         |
| Surr: 4-Terphenyl-d14                  | 60.5    | 39.4-107  |      | %REC      | 1  | 9/25/2014 8:04:09 PM | 15483         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | 0.00185 | 0.00178   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Toluene                                | ND      | 0.00178   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Ethylbenzene                           | ND      | 0.00178   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Xylenes, Total                         | 0.00591 | 0.00178   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00178   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,2,4-Trimethylbenzene                 | 0.00668 | 0.00178   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,3,5-Trimethylbenzene                 | 0.00493 | 0.00178   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00178   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00178   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Naphthalene                            | ND      | 0.00178   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1-Methylnaphthalene                    | ND      | 0.00356   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 2-Methylnaphthalene                    | ND      | 0.00356   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Acetone                                | 0.0705  | 0.00891   |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:25:00 PM

**Lab ID:** 1409B77-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Bromodichloromethane                   | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Bromoform                              | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Bromomethane                           | ND     | 0.00267 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 2-Butanone                             | ND     | 0.00891 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Carbon tetrachloride                   | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Chlorobenzene                          | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Chloroethane                           | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Chloroform                             | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Chloromethane                          | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 2-Chlorotoluene                        | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Carbon disulfide                       | ND     | 0.00891 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 4-Chlorotoluene                        | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| cis-1,2-DCE                            | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| cis-1,3-Dichloropropene                | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Dibromochloromethane                   | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Dibromomethane                         | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,2-Dichlorobenzene                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,3-Dichlorobenzene                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,4-Dichlorobenzene                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Dichlorodifluoromethane                | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,1-Dichloroethane                     | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,1-Dichloroethene                     | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,2-Dichloropropane                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,3-Dichloropropane                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 2,2-Dichloropropane                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 1,1-Dichloropropene                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Hexachlorobutadiene                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Isopropylbenzene                       | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 4-Isopropyltoluene                     | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Methylene chloride                     | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| n-Butylbenzene                         | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 2-Hexanone                             | ND     | 0.00891 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| n-Propylbenzene                        | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| sec-Butylbenzene                       | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| Styrene                                | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| 4-Methyl-2-pentanone                   | ND     | 0.00891 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |
| tert-Butylbenzene                      | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/25/2014 3:24:54 PM | 15499         |

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

|                    |                                                   |                                                      |              |
|--------------------|---------------------------------------------------|------------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    | Page 5 of 44 |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |              |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |              |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |              |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |              |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:25:00 PM

**Lab ID:** 1409B77-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL       | Qual | Units         | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|----------|------|---------------|----|----------------------|-------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      | Analyst: cadg |    |                      |       |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| Tetrachloroethene (PCE)                | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| trans-1,2-DCE                          | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| trans-1,3-Dichloropropene              | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| 1,1,1-Trichloroethane                  | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| 1,1,2-Trichloroethane                  | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| Trichloroethene (TCE)                  | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| Trichlorofluoromethane                 | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| 1,2,3-Trichloropropane                 | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| Vinyl chloride                         | ND     | 0.00178  |      | mg/Kg-dry     | 1  | 9/25/2014 3:24:54 PM | 15499 |
| Surr: 1,2-Dichloroethane-d4            | 109    | 70-130   |      | %REC          | 1  | 9/25/2014 3:24:54 PM | 15499 |
| Surr: 4-Bromofluorobenzene             | 119    | 65.3-135 |      | %REC          | 1  | 9/25/2014 3:24:54 PM | 15499 |
| Surr: Dibromofluoromethane             | 107    | 70-130   |      | %REC          | 1  | 9/25/2014 3:24:54 PM | 15499 |
| Surr: Toluene-d8                       | 106    | 70-130   |      | %REC          | 1  | 9/25/2014 3:24:54 PM | 15499 |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 44 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B77**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (12-14')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:40:00 PM

**Lab ID:** 1409B77-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF  | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|-----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |     |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 2300   | 110      |      | mg/Kg-dry | 10  | 9/29/2014 2:37:52 PM  | 15526                |
| Motor Oil Range Organics (MRO)                 | ND     | 570      |      | mg/Kg-dry | 10  | 9/29/2014 2:37:52 PM  | 15526                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10  | 9/29/2014 2:37:52 PM  | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |     |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 3000   | 370      |      | mg/Kg-dry | 100 | 9/27/2014 2:27:03 PM  | R21498               |
| Surr: BFB                                      | 251    | 80-120   | S    | %REC      | 100 | 9/27/2014 2:27:03 PM  | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |     |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 12     | 1.0      |      | wt%       | 1   | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |     |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.037    |      | mg/Kg-dry | 1   | 10/7/2014 12:07:28 PM | 15733                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |     |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 5.7      |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Arsenic                                        | ND     | 5.7      |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Barium                                         | 250    | 0.23     |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Beryllium                                      | 0.74   | 0.34     |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Cadmium                                        | ND     | 0.23     |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Chromium                                       | 9.2    | 0.68     |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Cobalt                                         | 6.4    | 0.68     |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Lead                                           | 6.3    | 0.57     |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Nickel                                         | 9.6    | 1.1      |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Selenium                                       | ND     | 5.7      |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Silver                                         | ND     | 0.57     |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Vanadium                                       | 30     | 5.7      |      | mg/Kg-dry | 2   | 10/1/2014 3:02:22 PM  | 15559                |
| Zinc                                           | 42     | 5.7      |      | mg/Kg-dry | 2   | 10/2/2014 12:50:19 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |     |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |
| Benzoic acid                                   | ND     | 0.57     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry | 1   | 9/25/2014 8:32:04 PM  | 15483                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (12-14')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:40:00 PM

**Lab ID:** 1409B77-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 4-Chloroaniline                        | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.46 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.46 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| Isophorone                             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 1-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |
| 2-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 8:32:04 PM | 15483        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-1 (12-14')

Project: GROUP 9

Collection Date: 9/22/2014 12:40:00 PM

Lab ID: 1409B77-002

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL        | Qual | Units        | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|-----------|------|--------------|----|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC |    |                      |       |
| 2-Methylphenol                         | ND     | 0.57      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| 3+4-Methylphenol                       | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| N-Nitrosodi-n-propylamine              | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| N-Nitrosodiphenylamine                 | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Naphthalene                            | 2.4    | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| 2-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| 3-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| 4-Nitroaniline                         | ND     | 0.46      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Nitrobenzene                           | ND     | 0.57      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| 2-Nitrophenol                          | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| 4-Nitrophenol                          | ND     | 0.29      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Pentachlorophenol                      | ND     | 0.46      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Phenanthrene                           | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Phenol                                 | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Pyrene                                 | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Pyridine                               | ND     | 0.57      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| 2,4,5-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| 2,4,6-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry    | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Surr: 2-Fluorophenol                   | 43.0   | 21-111    |      | %REC         | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Surr: Phenol-d5                        | 63.9   | 23.1-117  |      | %REC         | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Surr: 2,4,6-Tribromophenol             | 75.5   | 22.7-88.9 |      | %REC         | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Surr: Nitrobenzene-d5                  | 0      | 24.5-126  | S    | %REC         | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Surr: 2-Fluorobiphenyl                 | 78.8   | 21.2-129  |      | %REC         | 1  | 9/25/2014 8:32:04 PM | 15483 |
| Surr: 4-Terphenyl-d14                  | 82.5   | 39.4-107  |      | %REC         | 1  | 9/25/2014 8:32:04 PM | 15483 |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      | Analyst: RAA |    |                      |       |
| Benzene                                | 2.2    | 1.8       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Toluene                                | 12     | 1.8       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Ethylbenzene                           | 11     | 1.8       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Methyl tert-butyl ether (MTBE)         | ND     | 1.8       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| 1,2,4-Trimethylbenzene                 | 13     | 1.8       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| 1,3,5-Trimethylbenzene                 | 11     | 1.8       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| 1,2-Dichloroethane (EDC)               | ND     | 1.8       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| 1,2-Dibromoethane (EDB)                | ND     | 1.8       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Naphthalene                            | ND     | 3.7       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| 1-Methylnaphthalene                    | ND     | 7.4       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| 2-Methylnaphthalene                    | ND     | 7.4       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Acetone                                | ND     | 28        |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Bromobenzene                           | ND     | 1.8       |      | mg/Kg-dry    | 50 | 9/30/2014 2:16:44 AM | 15490 |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (12-14')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:40:00 PM

**Lab ID:** 1409B77-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL  | Qual | Units     | DF                  | Date Analyzed        | Batch |
|------------------------------------|--------|-----|------|-----------|---------------------|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |           | Analyst: <b>RAA</b> |                      |       |
| Bromodichloromethane               | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Bromoform                          | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Bromomethane                       | ND     | 5.5 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 2-Butanone                         | ND     | 18  |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Carbon disulfide                   | ND     | 18  |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Carbon tetrachloride               | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Chlorobenzene                      | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Chloroethane                       | ND     | 3.7 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Chloroform                         | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Chloromethane                      | ND     | 5.5 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 2-Chlorotoluene                    | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 4-Chlorotoluene                    | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| cis-1,2-DCE                        | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| cis-1,3-Dichloropropene            | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 1,2-Dibromo-3-chloropropane        | ND     | 3.7 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Dibromochloromethane               | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Dibromomethane                     | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 1,2-Dichlorobenzene                | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 1,3-Dichlorobenzene                | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 1,4-Dichlorobenzene                | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Dichlorodifluoromethane            | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 1,1-Dichloroethane                 | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 1,1-Dichloroethene                 | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 1,2-Dichloropropane                | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 1,3-Dichloropropane                | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 2,2-Dichloropropane                | ND     | 3.7 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 1,1-Dichloropropene                | ND     | 3.7 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Hexachlorobutadiene                | ND     | 3.7 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 2-Hexanone                         | ND     | 18  |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Isopropylbenzene                   | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 4-Isopropyltoluene                 | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 4-Methyl-2-pentanone               | ND     | 18  |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Methylene chloride                 | ND     | 5.5 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| n-Butylbenzene                     | ND     | 5.5 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| n-Propylbenzene                    | 4.0    | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| sec-Butylbenzene                   | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| Styrene                            | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| tert-Butylbenzene                  | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |
| 1,1,1,2-Tetrachloroethane          | ND     | 1.8 |      | mg/Kg-dry | 50                  | 9/30/2014 2:16:44 AM | 15490 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B77**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (12-14')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:40:00 PM

**Lab ID:** 1409B77-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |       |
| 1,1,2,2-Tetrachloroethane          | ND     | 1.8    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Tetrachloroethene (PCE)            | ND     | 1.8    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| trans-1,2-DCE                      | ND     | 1.8    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| trans-1,3-Dichloropropene          | ND     | 1.8    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| 1,2,3-Trichlorobenzene             | ND     | 3.7    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| 1,2,4-Trichlorobenzene             | ND     | 1.8    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| 1,1,1-Trichloroethane              | ND     | 1.8    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| 1,1,2-Trichloroethane              | ND     | 1.8    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Trichloroethene (TCE)              | ND     | 1.8    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Trichlorofluoromethane             | ND     | 1.8    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| 1,2,3-Trichloropropane             | ND     | 3.7    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Vinyl chloride                     | ND     | 1.8    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Xylenes, Total                     | 110    | 3.7    |      | mg/Kg-dry           | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Surr: Dibromofluoromethane         | 75.3   | 70-130 |      | %REC                | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Surr: 1,2-Dichloroethane-d4        | 89.9   | 70-130 |      | %REC                | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Surr: Toluene-d8                   | 92.0   | 70-130 |      | %REC                | 50 | 9/30/2014 2:16:44 AM | 15490 |
| Surr: 4-Bromofluorobenzene         | 111    | 70-130 |      | %REC                | 50 | 9/30/2014 2:16:44 AM | 15490 |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 11 of 44 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B77**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (26'28')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:45:00 PM

**Lab ID:** 1409B77-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 420    | 10       |      | mg/Kg-dry | 1  | 9/29/2014 2:59:40 PM  | 15526                |
| Motor Oil Range Organics (MRO)                 | ND     | 52       |      | mg/Kg-dry | 1  | 9/29/2014 2:59:40 PM  | 15526                |
| Surr: DNOP                                     | 98.7   | 57.9-140 |      | %REC      | 1  | 9/29/2014 2:59:40 PM  | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 130    | 25       |      | mg/Kg-dry | 5  | 9/26/2014 8:58:54 PM  | 15490                |
| Surr: BFB                                      | 191    | 80-120   | S    | %REC      | 5  | 9/26/2014 8:58:54 PM  | 15490                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 3.5    | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.034    |      | mg/Kg-dry | 1  | 10/7/2014 12:09:16 PM | 15733                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:49:22 PM  | 15559                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:49:22 PM  | 15559                |
| Barium                                         | 380    | 0.20     |      | mg/Kg-dry | 2  | 10/1/2014 3:03:36 PM  | 15559                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/1/2014 1:49:22 PM  | 15559                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:49:22 PM  | 15559                |
| Chromium                                       | 2.1    | 0.30     |      | mg/Kg-dry | 1  | 10/1/2014 1:49:22 PM  | 15559                |
| Cobalt                                         | 4.2    | 0.30     |      | mg/Kg-dry | 1  | 10/1/2014 1:49:22 PM  | 15559                |
| Lead                                           | 5.5    | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 1:49:22 PM  | 15559                |
| Nickel                                         | 2.1    | 0.50     |      | mg/Kg-dry | 1  | 10/1/2014 1:49:22 PM  | 15559                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:49:22 PM  | 15559                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 1:49:22 PM  | 15559                |
| Vanadium                                       | 23     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:49:22 PM  | 15559                |
| Zinc                                           | 23     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 12:51:36 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 8:59:55 PM  | 15483                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (26'28')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:45:00 PM

**Lab ID:** 1409B77-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF           | Date Analyzed        | Batch |
|----------------------------------------|--------|------|------|-----------|--------------|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           | Analyst: JDC |                      |       |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Di-n-octyl phthalate                   | ND     | 0.41 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 2,4-Dichlorophenol                     | ND     | 0.41 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 1-Methylnaphthalene                    | 1.8    | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |
| 2-Methylnaphthalene                    | 2.6    | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 8:59:55 PM | 15483 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (26'28')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:45:00 PM

**Lab ID:** 1409B77-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL        | Qual | Units        | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|-----------|------|--------------|----|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC |    |                      |       |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Naphthalene                            | 0.69   | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| 4-Nitroaniline                         | ND     | 0.41      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Pentachlorophenol                      | ND     | 0.41      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Phenanthrene                           | 0.57   | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Surr: 2-Fluorophenol                   | 61.7   | 21-111    |      | %REC         | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Surr: Phenol-d5                        | 59.0   | 23.1-117  |      | %REC         | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Surr: 2,4,6-Tribromophenol             | 78.3   | 22.7-88.9 |      | %REC         | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Surr: Nitrobenzene-d5                  | 66.3   | 24.5-126  |      | %REC         | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Surr: 2-Fluorobiphenyl                 | 70.0   | 21.2-129  |      | %REC         | 1  | 9/25/2014 8:59:55 PM | 15483 |
| Surr: 4-Terphenyl-d14                  | 73.6   | 39.4-107  |      | %REC         | 1  | 9/25/2014 8:59:55 PM | 15483 |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      | Analyst: RAA |    |                      |       |
| Benzene                                | ND     | 0.50      |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| Toluene                                | ND     | 0.50      |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| Ethylbenzene                           | 1.3    | 0.50      |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.50      |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| 1,2,4-Trimethylbenzene                 | 9.9    | 0.50      |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| 1,3,5-Trimethylbenzene                 | 3.6    | 0.50      |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.50      |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.50      |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| Naphthalene                            | 3.2    | 0.99      |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| 1-Methylnaphthalene                    | 4.8    | 2.0       |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| 2-Methylnaphthalene                    | 8.3    | 2.0       |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| Acetone                                | ND     | 7.5       |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |
| Bromobenzene                           | ND     | 0.50      |      | mg/Kg-dry    | 10 | 9/30/2014 1:46:30 PM | 15490 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (26'28')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:45:00 PM

**Lab ID:** 1409B77-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Bromoform                          | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Bromomethane                       | ND     | 1.5  |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 2-Butanone                         | ND     | 5.0  |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Carbon disulfide                   | ND     | 5.0  |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Carbon tetrachloride               | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Chlorobenzene                      | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Chloroethane                       | ND     | 0.99 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Chloroform                         | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Chloromethane                      | ND     | 1.5  |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 2-Chlorotoluene                    | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 4-Chlorotoluene                    | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| cis-1,2-DCE                        | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| cis-1,3-Dichloropropene            | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.99 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Dibromochloromethane               | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Dibromomethane                     | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,2-Dichlorobenzene                | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,3-Dichlorobenzene                | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,4-Dichlorobenzene                | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Dichlorodifluoromethane            | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,1-Dichloroethane                 | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,1-Dichloroethene                 | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,2-Dichloropropane                | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,3-Dichloropropane                | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 2,2-Dichloropropane                | ND     | 0.99 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,1-Dichloropropene                | ND     | 0.99 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Hexachlorobutadiene                | ND     | 0.99 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 2-Hexanone                         | ND     | 5.0  |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Isopropylbenzene                   | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 4-Isopropyltoluene                 | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 4-Methyl-2-pentanone               | ND     | 5.0  |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Methylene chloride                 | ND     | 1.5  |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| n-Butylbenzene                     | ND     | 1.5  |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| n-Propylbenzene                    | 1.8    | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| sec-Butylbenzene                   | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Styrene                            | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| tert-Butylbenzene                  | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.50 |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-1 (26'28')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 12:45:00 PM

**Lab ID:** 1409B77-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|--------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: RAA |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.50   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Tetrachloroethene (PCE)            | ND     | 0.50   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| trans-1,2-DCE                      | ND     | 0.50   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| trans-1,3-Dichloropropene          | ND     | 0.50   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,2,3-Trichlorobenzene             | ND     | 0.99   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,2,4-Trichlorobenzene             | ND     | 0.50   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,1,1-Trichloroethane              | ND     | 0.50   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,1,2-Trichloroethane              | ND     | 0.50   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Trichloroethene (TCE)              | ND     | 0.50   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Trichlorofluoromethane             | ND     | 0.50   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| 1,2,3-Trichloropropane             | ND     | 0.99   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Vinyl chloride                     | ND     | 0.50   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Xylenes, Total                     | 6.9    | 0.99   |      | mg/Kg-dry | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Surr: Dibromofluoromethane         | 73.8   | 70-130 |      | %REC      | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Surr: 1,2-Dichloroethane-d4        | 85.8   | 70-130 |      | %REC      | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Surr: Toluene-d8                   | 91.6   | 70-130 |      | %REC      | 10 | 9/30/2014 1:46:30 PM | 15490        |
| Surr: 4-Bromofluorobenzene         | 107    | 70-130 |      | %REC      | 10 | 9/30/2014 1:46:30 PM | 15490        |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 16 of 44 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B77**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:40:00 PM

**Lab ID:** 1409B77-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 9/29/2014 3:21:16 PM  | 15526                |
| Motor Oil Range Organics (MRO)                 | ND     | 55       |      | mg/Kg-dry | 1  | 9/29/2014 3:21:16 PM  | 15526                |
| Surr: DNOP                                     | 113    | 57.9-140 |      | %REC      | 1  | 9/29/2014 3:21:16 PM  | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.6      |      | mg/Kg-dry | 1  | 9/27/2014 2:57:06 PM  | R21498               |
| Surr: BFB                                      | 88.1   | 80-120   |      | %REC      | 1  | 9/27/2014 2:57:06 PM  | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 11     | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 10/7/2014 12:11:05 PM | 15733                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Arsenic                                        | 4.1    | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Barium                                         | 200    | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Beryllium                                      | 0.49   | 0.16     |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Chromium                                       | 7.6    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Cobalt                                         | 5.4    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Lead                                           | 19     | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Nickel                                         | 7.2    | 0.55     |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Vanadium                                       | 26     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:50:46 PM  | 15559                |
| Zinc                                           | 100    | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 12:52:52 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |
| Benzoic acid                                   | ND     | 0.57     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM  | 15483                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:40:00 PM

**Lab ID:** 1409B77-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 4-Chloroaniline                        | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| Isophorone                             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 1-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |
| 2-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/26/2014 3:29:47 AM | 15483        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:40:00 PM

**Lab ID:** 1409B77-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL        | Qual | Units         | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|-----------|------|---------------|----|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC  |    |                      |       |
| 2-Methylphenol                         | ND     | 0.57      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| 3+4-Methylphenol                       | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| N-Nitrosodi-n-propylamine              | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| N-Nitrosodiphenylamine                 | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Naphthalene                            | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| 2-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| 3-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| 4-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Nitrobenzene                           | ND     | 0.57      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| 2-Nitrophenol                          | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| 4-Nitrophenol                          | ND     | 0.28      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Pentachlorophenol                      | ND     | 0.45      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Phenanthrene                           | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Phenol                                 | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Pyrene                                 | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Pyridine                               | ND     | 0.57      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| 2,4,5-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| 2,4,6-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry     | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Surr: 2-Fluorophenol                   | 70.9   | 21-111    |      | %REC          | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Surr: Phenol-d5                        | 76.1   | 23.1-117  |      | %REC          | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Surr: 2,4,6-Tribromophenol             | 47.6   | 22.7-88.9 |      | %REC          | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Surr: Nitrobenzene-d5                  | 82.2   | 24.5-126  |      | %REC          | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Surr: 2-Fluorobiphenyl                 | 79.0   | 21.2-129  |      | %REC          | 1  | 9/26/2014 3:29:47 AM | 15483 |
| Surr: 4-Terphenyl-d14                  | 69.7   | 39.4-107  |      | %REC          | 1  | 9/26/2014 3:29:47 AM | 15483 |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      | Analyst: cadg |    |                      |       |
| Benzene                                | ND     | 0.00202   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| Toluene                                | ND     | 0.00202   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| Ethylbenzene                           | ND     | 0.00202   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| Xylenes, Total                         | ND     | 0.00202   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00202   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00202   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00202   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00202   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00202   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| Naphthalene                            | ND     | 0.00202   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| 1-Methylnaphthalene                    | ND     | 0.00404   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| 2-Methylnaphthalene                    | ND     | 0.00404   |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |
| Acetone                                | 0.0154 | 0.0101    |      | mg/Kg-dry     | 1  | 9/25/2014 3:53:42 PM | 15499 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-2 (0.5-2')

Project: GROUP 9

Collection Date: 9/22/2014 3:40:00 PM

Lab ID: 1409B77-004

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Bromodichloromethane                   | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Bromoform                              | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Bromomethane                           | ND     | 0.00303 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 2-Butanone                             | ND     | 0.0101  |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Carbon tetrachloride                   | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Chlorobenzene                          | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Chloroethane                           | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Chloroform                             | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Chloromethane                          | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 2-Chlorotoluene                        | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Carbon disulfide                       | ND     | 0.0101  |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 4-Chlorotoluene                        | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| cis-1,2-DCE                            | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| cis-1,3-Dichloropropene                | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Dibromochloromethane                   | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Dibromomethane                         | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 1,2-Dichlorobenzene                    | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 1,3-Dichlorobenzene                    | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 1,4-Dichlorobenzene                    | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Dichlorodifluoromethane                | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 1,1-Dichloroethane                     | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 1,1-Dichloroethene                     | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 1,2-Dichloropropane                    | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 1,3-Dichloropropane                    | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 2,2-Dichloropropane                    | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 1,1-Dichloropropene                    | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Hexachlorobutadiene                    | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Isopropylbenzene                       | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 4-Isopropyltoluene                     | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Methylene chloride                     | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| n-Butylbenzene                         | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 2-Hexanone                             | ND     | 0.0101  |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| n-Propylbenzene                        | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| sec-Butylbenzene                       | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| Styrene                                | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| 4-Methyl-2-pentanone                   | ND     | 0.0101  |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |
| tert-Butylbenzene                      | ND     | 0.00202 |      | mg/Kg-dry | 1  | 9/25/2014 3:53:42 PM | 15499         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B77**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:40:00 PM

**Lab ID:** 1409B77-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF                   | Date Analyzed        | Batch |
|----------------------------------------|--------|----------|------|-----------|----------------------|----------------------|-------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           | Analyst: <b>cadg</b> |                      |       |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| Tetrachloroethene (PCE)                | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| trans-1,2-DCE                          | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| trans-1,3-Dichloropropene              | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| 1,1,1-Trichloroethane                  | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| 1,1,2-Trichloroethane                  | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| Trichloroethene (TCE)                  | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| Trichlorofluoromethane                 | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| 1,2,3-Trichloropropane                 | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| Vinyl chloride                         | ND     | 0.00202  |      | mg/Kg-dry | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| Surr: 1,2-Dichloroethane-d4            | 104    | 70-130   |      | %REC      | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| Surr: 4-Bromofluorobenzene             | 100    | 65.3-135 |      | %REC      | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| Surr: Dibromofluoromethane             | 101    | 70-130   |      | %REC      | 1                    | 9/25/2014 3:53:42 PM | 15499 |
| Surr: Toluene-d8                       | 97.8   | 70-130   |      | %REC      | 1                    | 9/25/2014 3:53:42 PM | 15499 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B77**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:45:00 PM

**Lab ID:** 1409B77-005

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 360    | 10       |      | mg/Kg-dry | 1  | 9/29/2014 3:42:43 PM  | 15526                |
| Motor Oil Range Organics (MRO)                 | ND     | 52       |      | mg/Kg-dry | 1  | 9/29/2014 3:42:43 PM  | 15526                |
| Surr: DNOP                                     | 108    | 57.9-140 |      | %REC      | 1  | 9/29/2014 3:42:43 PM  | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 20     | 10       |      | mg/Kg-dry | 2  | 9/26/2014 9:29:11 PM  | 15490                |
| Surr: BFB                                      | 131    | 80-120   | S    | %REC      | 2  | 9/26/2014 9:29:11 PM  | 15490                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 4.0    | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.034    |      | mg/Kg-dry | 1  | 10/7/2014 12:16:38 PM | 15733                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Arsenic                                        | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Barium                                         | 170    | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Chromium                                       | 5.7    | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Cobalt                                         | 3.1    | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Lead                                           | 2.4    | 0.26     |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Nickel                                         | 2.2    | 0.51     |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Vanadium                                       | 21     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:51:59 PM  | 15559                |
| Zinc                                           | 15     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 12:54:06 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM  | 15483                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-2 (24-26')

Project: GROUP 9

Collection Date: 9/22/2014 3:45:00 PM

Lab ID: 1409B77-005

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF           | Date Analyzed        | Batch |
|----------------------------------------|--------|------|------|-----------|--------------|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           | Analyst: JDC |                      |       |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 1-Methylnaphthalene                    | 1.2    | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |
| 2-Methylnaphthalene                    | 1.9    | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:27:48 PM | 15483 |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:45:00 PM

**Lab ID:** 1409B77-005

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Naphthalene                            | 0.42   | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Phenanthrene                           | 0.39   | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Surr: 2-Fluorophenol                   | 54.2   | 21-111    |      | %REC      | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Surr: Phenol-d5                        | 59.4   | 23.1-117  |      | %REC      | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Surr: 2,4,6-Tribromophenol             | 60.8   | 22.7-88.9 |      | %REC      | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Surr: Nitrobenzene-d5                  | 61.9   | 24.5-126  |      | %REC      | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Surr: 2-Fluorobiphenyl                 | 66.0   | 21.2-129  |      | %REC      | 1  | 9/25/2014 9:27:48 PM | 15483        |
| Surr: 4-Terphenyl-d14                  | 68.4   | 39.4-107  |      | %REC      | 1  | 9/25/2014 9:27:48 PM | 15483        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.26      |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Toluene                                | ND     | 0.26      |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Ethylbenzene                           | ND     | 0.26      |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.26      |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,2,4-Trimethylbenzene                 | 0.30   | 0.26      |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.26      |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.26      |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.26      |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Naphthalene                            | 0.81   | 0.52      |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1-Methylnaphthalene                    | 1.9    | 1.0       |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 2-Methylnaphthalene                    | 3.2    | 1.0       |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Acetone                                | ND     | 3.9       |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Bromobenzene                           | ND     | 0.26      |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:45:00 PM

**Lab ID:** 1409B77-005

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Bromoform                          | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Bromomethane                       | ND     | 0.78 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 2-Butanone                         | ND     | 2.6  |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Carbon disulfide                   | ND     | 2.6  |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Carbon tetrachloride               | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Chlorobenzene                      | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Chloroethane                       | ND     | 0.52 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Chloroform                         | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Chloromethane                      | ND     | 0.78 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 2-Chlorotoluene                    | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 4-Chlorotoluene                    | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| cis-1,2-DCE                        | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| cis-1,3-Dichloropropene            | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.52 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Dibromochloromethane               | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Dibromomethane                     | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,2-Dichlorobenzene                | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,3-Dichlorobenzene                | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,4-Dichlorobenzene                | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Dichlorodifluoromethane            | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,1-Dichloroethane                 | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,1-Dichloroethene                 | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,2-Dichloropropane                | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,3-Dichloropropane                | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 2,2-Dichloropropane                | ND     | 0.52 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,1-Dichloropropene                | ND     | 0.52 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Hexachlorobutadiene                | ND     | 0.52 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 2-Hexanone                         | ND     | 2.6  |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Isopropylbenzene                   | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 4-Isopropyltoluene                 | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 4-Methyl-2-pentanone               | ND     | 2.6  |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Methylene chloride                 | ND     | 0.78 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| n-Butylbenzene                     | ND     | 0.78 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| n-Propylbenzene                    | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| sec-Butylbenzene                   | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| Styrene                            | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| tert-Butylbenzene                  | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.26 |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:45:00 PM

**Lab ID:** 1409B77-005

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.26   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| Tetrachloroethene (PCE)            | ND     | 0.26   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| trans-1,2-DCE                      | ND     | 0.26   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| trans-1,3-Dichloropropene          | ND     | 0.26   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| 1,2,3-Trichlorobenzene             | ND     | 0.52   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| 1,2,4-Trichlorobenzene             | ND     | 0.26   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| 1,1,1-Trichloroethane              | ND     | 0.26   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| 1,1,2-Trichloroethane              | ND     | 0.26   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| Trichloroethene (TCE)              | ND     | 0.26   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| Trichlorofluoromethane             | ND     | 0.26   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| 1,2,3-Trichloropropane             | ND     | 0.52   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| Vinyl chloride                     | ND     | 0.26   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| Xylenes, Total                     | ND     | 0.52   |      | mg/Kg-dry | 5  | 9/30/2014 2:14:38 PM | 15490               |
| Surr: Dibromofluoromethane         | 82.7   | 70-130 |      | %REC      | 5  | 9/30/2014 2:14:38 PM | 15490               |
| Surr: 1,2-Dichloroethane-d4        | 89.8   | 70-130 |      | %REC      | 5  | 9/30/2014 2:14:38 PM | 15490               |
| Surr: Toluene-d8                   | 96.1   | 70-130 |      | %REC      | 5  | 9/30/2014 2:14:38 PM | 15490               |
| Surr: 4-Bromofluorobenzene         | 97.7   | 70-130 |      | %REC      | 5  | 9/30/2014 2:14:38 PM | 15490               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B77**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:50:00 PM

**Lab ID:** 1409B77-006

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 660    | 10       |      | mg/Kg-dry | 1  | 9/29/2014 4:04:14 PM  | 15526                |
| Motor Oil Range Organics (MRO)                 | ND     | 52       |      | mg/Kg-dry | 1  | 9/29/2014 4:04:14 PM  | 15526                |
| Surr: DNOP                                     | 111    | 57.9-140 |      | %REC      | 1  | 9/29/2014 4:04:14 PM  | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 160    | 51       |      | mg/Kg-dry | 10 | 9/26/2014 9:59:17 PM  | 15490                |
| Surr: BFB                                      | 147    | 80-120   | S    | %REC      | 10 | 9/26/2014 9:59:17 PM  | 15490                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 3.7    | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.034    |      | mg/Kg-dry | 1  | 10/7/2014 12:18:29 PM | 15733                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Arsenic                                        | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Barium                                         | 200    | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Beryllium                                      | 0.16   | 0.16     |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Chromium                                       | 2.6    | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Cobalt                                         | 3.8    | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Lead                                           | 10     | 0.26     |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Nickel                                         | 2.8    | 0.52     |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Vanadium                                       | 19     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:53:16 PM  | 15559                |
| Zinc                                           | 16     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 12:55:19 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM  | 15483                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-2 (26-28')

Project: GROUP 9

Collection Date: 9/22/2014 3:50:00 PM

Lab ID: 1409B77-006

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF           | Date Analyzed        | Batch |
|----------------------------------------|--------|------|------|-----------|--------------|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           | Analyst: JDC |                      |       |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Fluorene                               | 0.35   | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 1-Methylnaphthalene                    | 3.2    | 0.21 |      | mg/Kg-dry | 1            | 9/25/2014 9:55:44 PM | 15483 |
| 2-Methylnaphthalene                    | 5.3    | 0.42 |      | mg/Kg-dry | 2            | 9/26/2014 6:58:07 PM | 15483 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:50:00 PM

**Lab ID:** 1409B77-006

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Naphthalene                            | 1.6    | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Phenanthrene                           | 0.70   | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Surr: 2-Fluorophenol                   | 57.7   | 21-111    |      | %REC      | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Surr: Phenol-d5                        | 59.3   | 23.1-117  |      | %REC      | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Surr: 2,4,6-Tribromophenol             | 69.0   | 22.7-88.9 |      | %REC      | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Surr: Nitrobenzene-d5                  | 73.4   | 24.5-126  |      | %REC      | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Surr: 2-Fluorobiphenyl                 | 62.8   | 21.2-129  |      | %REC      | 1  | 9/25/2014 9:55:44 PM | 15483        |
| Surr: 4-Terphenyl-d14                  | 78.8   | 39.4-107  |      | %REC      | 1  | 9/25/2014 9:55:44 PM | 15483        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.51      |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Toluene                                | ND     | 0.51      |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Ethylbenzene                           | 2.1    | 0.51      |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.51      |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,2,4-Trimethylbenzene                 | 9.5    | 0.51      |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,3,5-Trimethylbenzene                 | 2.3    | 0.51      |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.51      |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.51      |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Naphthalene                            | 3.2    | 1.0       |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1-Methylnaphthalene                    | 4.6    | 2.0       |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 2-Methylnaphthalene                    | 7.9    | 2.0       |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Acetone                                | ND     | 7.6       |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Bromobenzene                           | ND     | 0.51      |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:50:00 PM

**Lab ID:** 1409B77-006

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Bromoform                          | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Bromomethane                       | ND     | 1.5  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 2-Butanone                         | ND     | 5.1  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Carbon disulfide                   | ND     | 5.1  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Carbon tetrachloride               | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Chlorobenzene                      | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Chloroethane                       | ND     | 1.0  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Chloroform                         | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Chloromethane                      | ND     | 1.5  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 2-Chlorotoluene                    | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 4-Chlorotoluene                    | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| cis-1,2-DCE                        | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| cis-1,3-Dichloropropene            | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,2-Dibromo-3-chloropropane        | ND     | 1.0  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Dibromochloromethane               | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Dibromomethane                     | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,2-Dichlorobenzene                | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,3-Dichlorobenzene                | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,4-Dichlorobenzene                | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Dichlorodifluoromethane            | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,1-Dichloroethane                 | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,1-Dichloroethene                 | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,2-Dichloropropane                | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,3-Dichloropropane                | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 2,2-Dichloropropane                | ND     | 1.0  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,1-Dichloropropene                | ND     | 1.0  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Hexachlorobutadiene                | ND     | 1.0  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 2-Hexanone                         | ND     | 5.1  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Isopropylbenzene                   | 0.53   | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 4-Isopropyltoluene                 | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 4-Methyl-2-pentanone               | ND     | 5.1  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Methylene chloride                 | ND     | 1.5  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| n-Butylbenzene                     | ND     | 1.5  |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| n-Propylbenzene                    | 2.2    | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| sec-Butylbenzene                   | 0.54   | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| Styrene                            | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| tert-Butylbenzene                  | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.51 |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B77

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-2 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/22/2014 3:50:00 PM

**Lab ID:** 1409B77-006

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.51   |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| Tetrachloroethene (PCE)            | ND     | 0.51   |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| trans-1,2-DCE                      | ND     | 0.51   |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| trans-1,3-Dichloropropene          | ND     | 0.51   |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| 1,2,3-Trichlorobenzene             | ND     | 1.0    |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| 1,2,4-Trichlorobenzene             | ND     | 0.51   |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| 1,1,1-Trichloroethane              | ND     | 0.51   |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| 1,1,2-Trichloroethane              | ND     | 0.51   |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| Trichloroethene (TCE)              | ND     | 0.51   |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| Trichlorofluoromethane             | ND     | 0.51   |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| 1,2,3-Trichloropropane             | ND     | 1.0    |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| Vinyl chloride                     | ND     | 0.51   |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| Xylenes, Total                     | 6.6    | 1.0    |      | mg/Kg-dry | 10 | 9/30/2014 3:39:05 PM | 15490               |
| Surr: Dibromofluoromethane         | 77.7   | 70-130 |      | %REC      | 10 | 9/30/2014 3:39:05 PM | 15490               |
| Surr: 1,2-Dichloroethane-d4        | 85.5   | 70-130 |      | %REC      | 10 | 9/30/2014 3:39:05 PM | 15490               |
| Surr: Toluene-d8                   | 94.4   | 70-130 |      | %REC      | 10 | 9/30/2014 3:39:05 PM | 15490               |
| Surr: 4-Bromofluorobenzene         | 108    | 70-130 |      | %REC      | 10 | 9/30/2014 3:39:05 PM | 15490               |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 31 of 44 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Anatek Labs, Inc.

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

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

**Batch #:** 140925066  
**Project Name:** 1409B77

## Analytical Results Report

**Sample Number** 140925066-001 **Sampling Date** 9/22/2014 **Date/Time Received** 9/25/2014 12:50 PM  
**Client Sample ID** 1409B77-001C / SWMU 13-1 (0.5-2) **Sampling Time** 12:25 PM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.253 | 10/2/2014     | CRW     | EPA 335.4 |           |
| %moisture | 11.2   | Percent |       | 9/30/2014     | KJS     | %moisture |           |

**Sample Number** 140925066-002 **Sampling Date** 9/22/2014 **Date/Time Received** 9/25/2014 12:50 PM  
**Client Sample ID** 1409B77-002C / SWMU 13-1 (12-14) **Sampling Time** 12:40 PM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.264 | 10/2/2014     | CRW     | EPA 335.4 |           |
| %moisture | 11.6   | Percent |       | 9/30/2014     | KJS     | %moisture |           |

**Sample Number** 140925066-003 **Sampling Date** 9/22/2014 **Date/Time Received** 9/25/2014 12:50 PM  
**Client Sample ID** 1409B77-003C / SWMU 13-1 (26-28) **Sampling Time** 12:45 PM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.227 | 10/2/2014     | CRW     | EPA 335.4 |           |
| %moisture | 3      | Percent |       | 9/30/2014     | KJS     | %moisture |           |

**Sample Number** 140925066-004 **Sampling Date** 9/22/2014 **Date/Time Received** 9/25/2014 12:50 PM  
**Client Sample ID** 1409B77-004C / SWMU 13-2 (0.5-2) **Sampling Time** 3:40 PM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.253 | 10/2/2014     | CRW     | EPA 335.4 |           |
| %moisture | 10.9   | Percent |       | 9/30/2014     | KJS     | %moisture |           |

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

# Anatek Labs, Inc.

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

**Batch #:** 140925066  
**Project Name:** 1409B77

## Analytical Results Report

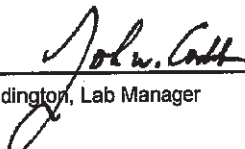
|                         |                                  |                        |           |                           |                    |
|-------------------------|----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140925066-005                    | <b>Sampling Date</b>   | 9/22/2014 | <b>Date/Time Received</b> | 9/25/2014 12:50 PM |
| <b>Client Sample ID</b> | 1409B77-005C / SWMU 13-2 (24-26) |                        |           | <b>Sampling Time</b>      | 3:45 PM            |
| <b>Matrix</b>           | Soil                             | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                  |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.223 | 10/2/2014     | CRW     | EPA 335.4 |           |
| %moisture | 4.3    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

|                         |                                  |                        |           |                           |                    |
|-------------------------|----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140925066-006                    | <b>Sampling Date</b>   | 9/22/2014 | <b>Date/Time Received</b> | 9/25/2014 12:50 PM |
| <b>Client Sample ID</b> | 1409B77-006C / SWMU 13-2 (26-28) |                        |           | <b>Sampling Time</b>      | 3:50 PM            |
| <b>Matrix</b>           | Soil                             | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                  |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.234 | 10/2/2014     | CRW     | EPA 335.4 |           |
| %moisture | 4.1    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

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

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

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

Monday, October 13, 2014

Page 2 of 2

# Anatek Labs, Inc.

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

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

**Batch #:** 140925066  
**Project Name:** 1409B77

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|-----------|---------------|
| Cyanide   | 0.500      | mg/kg | 0.5       | 100.0 | 90-110  | 10/2/2014 | 10/2/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|-------|---------|-----------|---------------|
| 140925060-001 | Cyanide   | ND            | 13.1      | mg/kg | 13.1     | 100.0 | 90-110  | 10/2/2014 | 10/2/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 12.9       | mg/kg | 13.1      | 98.5 | 1.5  | 0-25    | 10/2/2014 | 10/2/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/2/2014 | 10/2/2014     |

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

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C586; MT:Cert0095; FL(NELAP): E871099

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID <b>MB-15490</b>     | SampType: <b>MBLK</b>           |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|---------------------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>15490</b>          |     |           |             | RunNo: <b>21449</b>                               |                     |           |      |          |      |
| Prep Date: <b>9/24/2014</b>   | Analysis Date: <b>9/25/2014</b> |     |           |             | SeqNo: <b>627618</b>                              | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |             |                                                   |                     |           |      |          |      |
| Surr: BFB                     | 880                             |     | 1000      |             | 87.7                                              | 80                  | 120       |      |          |      |

| Sample ID <b>LCS-15490</b>    | SampType: <b>LCS</b>            |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|---------------------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>        | Batch ID: <b>15490</b>          |     |           |             | RunNo: <b>21449</b>                               |                     |           |      |          |      |
| Prep Date: <b>9/24/2014</b>   | Analysis Date: <b>9/25/2014</b> |     |           |             | SeqNo: <b>627619</b>                              | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 29                              | 5.0 | 25.00     | 0           | 116                                               | 65.8                | 139       |      |          |      |
| Surr: BFB                     | 980                             |     | 1000      |             | 98.0                                              | 80                  | 120       |      |          |      |

| Sample ID <b>5ML RB</b>       | SampType: <b>MBLK</b>           |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|---------------------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21487</b>         |     |           |             | RunNo: <b>21487</b>                               |                     |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/26/2014</b> |     |           |             | SeqNo: <b>628754</b>                              | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |             |                                                   |                     |           |      |          |      |
| Surr: BFB                     | 820                             |     | 1000      |             | 82.2                                              | 80                  | 120       |      |          |      |

| Sample ID <b>2.5UG GRO LCS</b> | SampType: <b>LCS</b>            |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                     |           |      |          |      |
|--------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|---------------------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>         | Batch ID: <b>R21487</b>         |     |           |             | RunNo: <b>21487</b>                               |                     |           |      |          |      |
| Prep Date:                     | Analysis Date: <b>9/26/2014</b> |     |           |             | SeqNo: <b>628755</b>                              | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                        | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)  | 23                              | 5.0 | 25.00     | 0           | 90.8                                              | 65.8                | 139       |      |          |      |
| Surr: BFB                      | 900                             |     | 1000      |             | 90.4                                              | 80                  | 120       |      |          |      |

| Sample ID <b>5ML RB</b>       | SampType: <b>MBLK</b>           |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|---------------------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21498</b>         |     |           |             | RunNo: <b>21498</b>                               |                     |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/27/2014</b> |     |           |             | SeqNo: <b>628838</b>                              | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |             |                                                   |                     |           |      |          |      |
| Surr: BFB                     | 870                             |     | 1000      |             | 86.8                                              | 80                  | 120       |      |          |      |

| Sample ID <b>2.5UG GRO LCS</b> | SampType: <b>LCS</b>            |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                     |           |      |          |      |
|--------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|---------------------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>         | Batch ID: <b>R21498</b>         |     |           |             | RunNo: <b>21498</b>                               |                     |           |      |          |      |
| Prep Date:                     | Analysis Date: <b>9/27/2014</b> |     |           |             | SeqNo: <b>628839</b>                              | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                        | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                               |               |                          |           |             |                                            |          |              |      |          |      |
|-------------------------------|---------------|--------------------------|-----------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS | SampType: LCS            |           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS          | Batch ID: R21498         |           |             | RunNo: 21498                               |          |              |      |          |      |
| Prep Date:                    |               | Analysis Date: 9/27/2014 |           |             | SeqNo: 628839                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result        | PQL                      | SPK value | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24            | 5.0                      | 25.00     | 0           | 96.5                                       | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 960           |                          | 1000      |             | 96.3                                       | 80       | 120          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |       |                |             |      |           |                             |      |              |      |
|--------------------------------|-----------|-------|----------------|-------------|------|-----------|-----------------------------|------|--------------|------|
| Sample ID                      | mb-15490  |       | SampType:      | MBLK        |      | TestCode: | EPA Method 8260B: Volatiles |      |              |      |
| Client ID:                     | PBS       |       | Batch ID:      | 15490       |      | RunNo:    | 21541                       |      |              |      |
| Prep Date:                     | 9/24/2014 |       | Analysis Date: | 9/30/2014   |      | SeqNo:    | 630675                      |      | Units: mg/Kg |      |
| Analyte                        | Result    | PQL   | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                   | %RPD | RPDLimit     | Qual |
| Benzene                        | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Toluene                        | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Ethylbenzene                   | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Naphthalene                    | ND        | 0.10  |                |             |      |           |                             |      |              |      |
| 1-Methylnaphthalene            | ND        | 0.20  |                |             |      |           |                             |      |              |      |
| 2-Methylnaphthalene            | ND        | 0.20  |                |             |      |           |                             |      |              |      |
| Acetone                        | ND        | 0.75  |                |             |      |           |                             |      |              |      |
| Bromobenzene                   | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Bromodichloromethane           | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Bromoform                      | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Bromomethane                   | ND        | 0.15  |                |             |      |           |                             |      |              |      |
| 2-Butanone                     | ND        | 0.50  |                |             |      |           |                             |      |              |      |
| Carbon disulfide               | ND        | 0.50  |                |             |      |           |                             |      |              |      |
| Carbon tetrachloride           | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Chlorobenzene                  | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Chloroethane                   | ND        | 0.10  |                |             |      |           |                             |      |              |      |
| Chloroform                     | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Chloromethane                  | ND        | 0.15  |                |             |      |           |                             |      |              |      |
| 2-Chlorotoluene                | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 4-Chlorotoluene                | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| cis-1,2-DCE                    | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| cis-1,3-Dichloropropene        | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.10  |                |             |      |           |                             |      |              |      |
| Dibromochloromethane           | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Dibromomethane                 | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2-Dichlorobenzene            | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,3-Dichlorobenzene            | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,4-Dichlorobenzene            | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Dichlorodifluoromethane        | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,1-Dichloroethane             | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,1-Dichloroethene             | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2-Dichloropropane            | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,3-Dichloropropane            | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 2,2-Dichloropropane            | ND        | 0.10  |                |             |      |           |                             |      |              |      |

### Qualifiers:

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

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |       |                |                  |      |           |                                    |      |                     |      |
|-----------------------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID                   | <b>mb-15490</b>  |       | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:                  | <b>PBS</b>       |       | Batch ID:      | <b>15490</b>     |      | RunNo:    | <b>21541</b>                       |      |                     |      |
| Prep Date:                  | <b>9/24/2014</b> |       | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>630675</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| 1,1-Dichloropropene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 2-Hexanone                  | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Isopropylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Methylene chloride          | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Butylbenzene              | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Propylbenzene             | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| sec-Butylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Styrene                     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| tert-Butylbenzene           | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,2-DCE               | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Vinyl chloride              | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Xylenes, Total              | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.40             |       | 0.5000         |                  | 79.5 | 70        | 130                                |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.43             |       | 0.5000         |                  | 85.8 | 70        | 130                                |      |                     |      |
| Surr: Toluene-d8            | 0.44             |       | 0.5000         |                  | 87.7 | 70        | 130                                |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.40             |       | 0.5000         |                  | 80.8 | 70        | 130                                |      |                     |      |

|               |                  |       |                |                  |      |           |                                    |      |                     |      |
|---------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID     | <b>ics-15490</b> |       | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:    | <b>LCSS</b>      |       | Batch ID:      | <b>15490</b>     |      | RunNo:    | <b>21541</b>                       |      |                     |      |
| Prep Date:    | <b>9/24/2014</b> |       | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>630676</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| Benzene       | 0.93             | 0.050 | 1.000          | 0                | 92.8 | 70        | 130                                |      |                     |      |
| Toluene       | 0.87             | 0.050 | 1.000          | 0                | 86.6 | 70        | 130                                |      |                     |      |
| Chlorobenzene | 0.90             | 0.050 | 1.000          | 0                | 90.1 | 70        | 130                                |      |                     |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |       |                          |             |      |                                       |           |              |          |      |
|-----------------------------|-----------|-------|--------------------------|-------------|------|---------------------------------------|-----------|--------------|----------|------|
| Sample ID                   | Ics-15490 |       | SampType: LCS            |             |      | TestCode: EPA Method 8260B: Volatiles |           |              |          |      |
| Client ID:                  | LCSS      |       | Batch ID: 15490          |             |      | RunNo: 21541                          |           |              |          |      |
| Prep Date:                  | 9/24/2014 |       | Analysis Date: 9/30/2014 |             |      | SeqNo: 630676                         |           | Units: mg/Kg |          |      |
| Analyte                     | Result    | PQL   | SPK value                | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD         | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.92      | 0.050 | 1.000                    | 0           | 92.0 | 60.5                                  | 160       |              |          |      |
| Trichloroethene (TCE)       | 0.93      | 0.050 | 1.000                    | 0           | 93.1 | 58.8                                  | 139       |              |          |      |
| Surr: Dibromofluoromethane  | 0.41      |       | 0.5000                   |             | 82.3 | 70                                    | 130       |              |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.44      |       | 0.5000                   |             | 88.7 | 70                                    | 130       |              |          |      |
| Surr: Toluene-d8            | 0.43      |       | 0.5000                   |             | 85.3 | 70                                    | 130       |              |          |      |
| Surr: 4-Bromofluorobenzene  | 0.44      |       | 0.5000                   |             | 88.2 | 70                                    | 130       |              |          |      |

|                             |                    |      |                          |             |      |                                       |           |                  |          |      |
|-----------------------------|--------------------|------|--------------------------|-------------|------|---------------------------------------|-----------|------------------|----------|------|
| Sample ID                   | 1409b77-005ams     |      | SampType: MS             |             |      | TestCode: EPA Method 8260B: Volatiles |           |                  |          |      |
| Client ID:                  | SWMU 13-2 (24-26') |      | Batch ID: 15490          |             |      | RunNo: 21567                          |           |                  |          |      |
| Prep Date:                  | 9/24/2014          |      | Analysis Date: 9/30/2014 |             |      | SeqNo: 631955                         |           | Units: mg/Kg-dry |          |      |
| Analyte                     | Result             | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD             | RPDLimit | Qual |
| Benzene                     | 1.0                | 0.26 | 1.036                    | 0           | 97.8 | 32.2                                  | 145       |                  |          |      |
| Toluene                     | 0.98               | 0.26 | 1.036                    | 0           | 94.4 | 29.1                                  | 139       |                  |          |      |
| Chlorobenzene               | 1.0                | 0.26 | 1.036                    | 0           | 99.6 | 32.4                                  | 142       |                  |          |      |
| 1,1-Dichloroethene          | 0.91               | 0.26 | 1.036                    | 0           | 88.2 | 32.6                                  | 155       |                  |          |      |
| Trichloroethene (TCE)       | 0.98               | 0.26 | 1.036                    | 0           | 94.6 | 29.2                                  | 150       |                  |          |      |
| Surr: Dibromofluoromethane  | 2.1                |      | 2.590                    |             | 81.0 | 70                                    | 130       |                  |          |      |
| Surr: 1,2-Dichloroethane-d4 | 2.2                |      | 2.590                    |             | 86.5 | 70                                    | 130       |                  |          |      |
| Surr: Toluene-d8            | 2.3                |      | 2.590                    |             | 89.3 | 70                                    | 130       |                  |          |      |
| Surr: 4-Bromofluorobenzene  | 2.5                |      | 2.590                    |             | 97.6 | 70                                    | 130       |                  |          |      |

|                             |                    |      |                          |             |      |                                       |           |                  |          |      |
|-----------------------------|--------------------|------|--------------------------|-------------|------|---------------------------------------|-----------|------------------|----------|------|
| Sample ID                   | 1409b77-005amsd    |      | SampType: MSD            |             |      | TestCode: EPA Method 8260B: Volatiles |           |                  |          |      |
| Client ID:                  | SWMU 13-2 (24-26') |      | Batch ID: 15490          |             |      | RunNo: 21567                          |           |                  |          |      |
| Prep Date:                  | 9/24/2014          |      | Analysis Date: 9/30/2014 |             |      | SeqNo: 631956                         |           | Units: mg/Kg-dry |          |      |
| Analyte                     | Result             | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD             | RPDLimit | Qual |
| Benzene                     | 1.0                | 0.26 | 1.034                    | 0           | 98.9 | 32.2                                  | 145       | 0.900            | 20       |      |
| Toluene                     | 1.0                | 0.26 | 1.034                    | 0           | 96.5 | 29.1                                  | 139       | 1.93             | 20       |      |
| Chlorobenzene               | 0.96               | 0.26 | 1.034                    | 0           | 92.9 | 32.4                                  | 142       | 7.19             | 20       |      |
| 1,1-Dichloroethene          | 0.89               | 0.26 | 1.034                    | 0           | 86.0 | 32.6                                  | 155       | 2.66             | 20       |      |
| Trichloroethene (TCE)       | 0.92               | 0.26 | 1.034                    | 0           | 88.6 | 29.2                                  | 150       | 6.76             | 20       |      |
| Surr: Dibromofluoromethane  | 2.0                |      | 2.585                    |             | 79.2 | 70                                    | 130       | 0                | 0        |      |
| Surr: 1,2-Dichloroethane-d4 | 2.2                |      | 2.585                    |             | 84.3 | 70                                    | 130       | 0                | 0        |      |
| Surr: Toluene-d8            | 2.4                |      | 2.585                    |             | 91.6 | 70                                    | 130       | 0                | 0        |      |
| Surr: 4-Bromofluorobenzene  | 2.4                |      | 2.585                    |             | 94.7 | 70                                    | 130       | 0                | 0        |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |     |                |                  |      |           |                                    |      |                    |      |
|-----------------------------|------------------|-----|----------------|------------------|------|-----------|------------------------------------|------|--------------------|------|
| Sample ID                   | <b>mb-15572</b>  |     | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                    |      |
| Client ID:                  | <b>PBS</b>       |     | Batch ID:      | <b>15572</b>     |      | RunNo:    | <b>21567</b>                       |      |                    |      |
| Prep Date:                  | <b>9/29/2014</b> |     | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632097</b>                      |      | Units: <b>%REC</b> |      |
| Analyte                     | Result           | PQL | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit           | Qual |
| Surr: Dibromofluoromethane  | 0.39             |     | 0.5000         |                  | 78.6 | 70        | 130                                |      |                    |      |
| Surr: 1,2-Dichloroethane-d4 | 0.39             |     | 0.5000         |                  | 78.3 | 70        | 130                                |      |                    |      |
| Surr: Toluene-d8            | 0.45             |     | 0.5000         |                  | 89.7 | 70        | 130                                |      |                    |      |
| Surr: 4-Bromofluorobenzene  | 0.43             |     | 0.5000         |                  | 85.4 | 70        | 130                                |      |                    |      |

|                             |                  |     |                |                  |      |           |                                    |      |                    |      |
|-----------------------------|------------------|-----|----------------|------------------|------|-----------|------------------------------------|------|--------------------|------|
| Sample ID                   | <b>lcs-15572</b> |     | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                    |      |
| Client ID:                  | <b>LCSS</b>      |     | Batch ID:      | <b>15572</b>     |      | RunNo:    | <b>21567</b>                       |      |                    |      |
| Prep Date:                  | <b>9/29/2014</b> |     | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632098</b>                      |      | Units: <b>%REC</b> |      |
| Analyte                     | Result           | PQL | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit           | Qual |
| Surr: Dibromofluoromethane  | 0.40             |     | 0.5000         |                  | 79.1 | 70        | 130                                |      |                    |      |
| Surr: 1,2-Dichloroethane-d4 | 0.39             |     | 0.5000         |                  | 77.7 | 70        | 130                                |      |                    |      |
| Surr: Toluene-d8            | 0.44             |     | 0.5000         |                  | 88.2 | 70        | 130                                |      |                    |      |
| Surr: 4-Bromofluorobenzene  | 0.42             |     | 0.5000         |                  | 85.0 | 70        | 130                                |      |                    |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |         |                          |             |                                           |          |              |      |          |      |
|--------------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15499  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                     | PBS       |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                     | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627937                             |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Toluene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Xylenes, Total                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| Acetone                        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromoform                      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromomethane                   | ND        | 0.00300 |                          |             |                                           |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroform                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloromethane                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15499  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | PBS       |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627937                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 2,2-Dichloropropane         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloropropene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Hexachlorobutadiene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Isopropylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Isopropyltoluene          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methylene chloride          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| n-Butylbenzene              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Hexanone                  | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| n-Propylbenzene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| sec-Butylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Styrene                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Methyl-2-pentanone        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| tert-Butylbenzene           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Tetrachloroethene (PCE)     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,2-DCE               | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,3-Dichloropropene   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichloroethene (TCE)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichlorofluoromethane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichloropropane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Vinyl chloride              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0207    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0235    |         | 0.02000                  |             | 117                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0206    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0199    |         | 0.02000                  |             | 99.7                                      | 70       | 130          |      |          |      |

|               |           |         |                          |             |                                           |          |              |      |          |      |
|---------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID     | LCS-15499 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:    | LCSS      |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:    | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627939                             |          | Units: mg/Kg |      |          |      |
| Analyte       | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Toluene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Chlorobenzene | 0.0103    | 0.00200 | 0.01000                  | 0           | 103                                       | 70       | 130          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                             |           |         |           |                |           |          |           |                                 |          |        |       |
|-----------------------------|-----------|---------|-----------|----------------|-----------|----------|-----------|---------------------------------|----------|--------|-------|
| Sample ID                   | LCS-15499 |         |           | SampType:      | LCS       |          | TestCode: | Method 8260B/5035LOW: VOLATILES |          |        |       |
| Client ID:                  | LCSS      |         |           | Batch ID:      | 15499     |          | RunNo:    | 21473                           |          |        |       |
| Prep Date:                  | 9/25/2014 |         |           | Analysis Date: | 9/25/2014 |          | SeqNo:    | 627939                          |          | Units: | mg/Kg |
| Analyte                     | Result    | PQL     | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD                            | RPDLimit | Qual   |       |
| 1,1-Dichloroethene          | 0.00912   | 0.00200 | 0.01000   | 0              | 91.2      | 70       | 130       |                                 |          |        |       |
| Trichloroethene (TCE)       | 0.00988   | 0.00200 | 0.01000   | 0              | 98.8      | 61.6     | 131       |                                 |          |        |       |
| Surr: 1,2-Dichloroethane-d4 | 0.0213    |         | 0.02000   |                | 107       | 70       | 130       |                                 |          |        |       |
| Surr: 4-Bromofluorobenzene  | 0.0228    |         | 0.02000   |                | 114       | 65.3     | 135       |                                 |          |        |       |
| Surr: Dibromofluoromethane  | 0.0201    |         | 0.02000   |                | 101       | 70       | 130       |                                 |          |        |       |
| Surr: Toluene-d8            | 0.0201    |         | 0.02000   |                | 100       | 70       | 130       |                                 |          |        |       |

|                             |                    |         |                          |             |                                           |          |                  |      |          |      |
|-----------------------------|--------------------|---------|--------------------------|-------------|-------------------------------------------|----------|------------------|------|----------|------|
| Sample ID                   | 1409b77-004ams     |         | SampType: MS             |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |                  |      |          |      |
| Client ID:                  | SWMU 13-2 (0.5-2') |         | Batch ID: 15499          |             | RunNo: 21473                              |          |                  |      |          |      |
| Prep Date:                  | 9/25/2014          |         | Analysis Date: 9/25/2014 |             | SeqNo: 627944                             |          | Units: mg/Kg-dry |      |          |      |
| Analyte                     | Result             | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Benzene                     | 0.00958            | 0.00205 | 0.01023                  | 0           | 93.6                                      | 70       | 130              |      |          |      |
| Toluene                     | 0.00989            | 0.00205 | 0.01023                  | 0.001088    | 86.0                                      | 70       | 130              |      |          |      |
| Chlorobenzene               | 0.0100             | 0.00205 | 0.01023                  | 0           | 97.9                                      | 70       | 130              |      |          |      |
| 1,1-Dichloroethene          | 0.00865            | 0.00205 | 0.01023                  | 0           | 84.5                                      | 70       | 130              |      |          |      |
| Trichloroethene (TCE)       | 0.00936            | 0.00205 | 0.01023                  | 0           | 91.5                                      | 70       | 130              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0217             |         | 0.02047                  |             | 106                                       | 70       | 130              |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0240             |         | 0.02047                  |             | 117                                       | 65.3     | 135              |      |          |      |
| Surr: Dibromofluoromethane  | 0.0207             |         | 0.02047                  |             | 101                                       | 70       | 130              |      |          |      |
| Surr: Toluene-d8            | 0.0210             |         | 0.02047                  |             | 103                                       | 70       | 130              |      |          |      |

|                             |                    |         |                |             |       |          |           |                                 |                  |      |  |
|-----------------------------|--------------------|---------|----------------|-------------|-------|----------|-----------|---------------------------------|------------------|------|--|
| Sample ID                   | 1409b77-004amsd    |         |                | SampType:   | MSD   |          | TestCode: | Method 8260B/5035LOW: VOLATILES |                  |      |  |
| Client ID:                  | SWMU 13-2 (0.5-2') |         |                | Batch ID:   | 15499 |          | RunNo:    | 21473                           |                  |      |  |
| Prep Date:                  | 9/25/2014          |         | Analysis Date: | 9/25/2014   |       | SeqNo:   | 627945    |                                 | Units: mg/Kg-dry |      |  |
| Analyte                     | Result             | PQL     | SPK value      | SPK Ref Val | %REC  | LowLimit | HighLimit | %RPD                            | RPDLimit         | Qual |  |
| Benzene                     | 0.00968            | 0.00203 | 0.01014        | 0           | 95.4  | 70       | 130       | 1.03                            | 20               |      |  |
| Toluene                     | 0.00903            | 0.00203 | 0.01014        | 0.001088    | 78.3  | 70       | 130       | 9.09                            | 20               |      |  |
| Chlorobenzene               | 0.00948            | 0.00203 | 0.01014        | 0           | 93.5  | 70       | 130       | 5.48                            | 20               |      |  |
| 1,1-Dichloroethene          | 0.00850            | 0.00203 | 0.01014        | 0           | 83.8  | 70       | 130       | 1.75                            | 20               |      |  |
| Trichloroethene (TCE)       | 0.00932            | 0.00203 | 0.01014        | 0           | 91.9  | 70       | 130       | 0.436                           | 20               |      |  |
| Surr: 1,2-Dichloroethane-d4 | 0.0216             |         | 0.02028        |             | 107   | 70       | 130       | 0                               | 0                |      |  |
| Surr: 4-Bromofluorobenzene  | 0.0221             |         | 0.02028        |             | 109   | 65.3     | 135       | 0                               | 0                |      |  |
| Surr: Dibromofluoromethane  | 0.0202             |         | 0.02028        |             | 99.5  | 70       | 130       | 0                               | 0                |      |  |
| Surr: Toluene-d8            | 0.0203             |         | 0.02028        |             | 100   | 70       | 130       | 0                               | 0                |      |  |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15483  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15483          |             | RunNo: 21456                              |          |              |      |          |      |
| Prep Date:                  | 9/24/2014 |      | Analysis Date: 9/25/2014 |             | SeqNo: 627716                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |                                           |          |              |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15483  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 15483     | RunNo:      | 21456                           |          |           |      |          |      |
| Prep Date:                 | 9/24/2014 | Analysis Date: | 9/25/2014 | SeqNo:      | 627716                          | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 2.2       |                | 3.330     |             | 66.7                            | 21       | 111       |      |          |      |
| Surr: Phenol-d5            | 2.2       |                | 3.330     |             | 67.5                            | 23.1     | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.9       |                | 3.330     |             | 57.0                            | 22.7     | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5      | 1.2       |                | 1.670     |             | 72.7                            | 24.5     | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.1       |                | 1.670     |             | 67.2                            | 21.2     | 129       |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |                | 1.670     |             | 77.9                            | 39.4     | 107       |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | lcs-15483 |      | SampType: LCS            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15483          |             |      | RunNo: 21456                              |           |              |          |      |
| Prep Date:                 | 9/24/2014 |      | Analysis Date: 9/25/2014 |             |      | SeqNo: 627717                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Acenaphthene               | 1.2       | 0.20 | 1.670                    | 0           | 71.4 | 50.7                                      | 110       |              |          |      |
| 4-Chloro-3-methylphenol    | 2.7       | 0.50 | 3.330                    | 0           | 81.5 | 47.8                                      | 107       |              |          |      |
| 2-Chlorophenol             | 2.7       | 0.20 | 3.330                    | 0           | 80.1 | 45.7                                      | 108       |              |          |      |
| 1,4-Dichlorobenzene        | 1.1       | 0.20 | 1.670                    | 0           | 66.3 | 46.1                                      | 112       |              |          |      |
| 2,4-Dinitrotoluene         | 0.99      | 0.50 | 1.670                    | 0           | 59.0 | 44.9                                      | 114       |              |          |      |
| N-Nitrosodi-n-propylamine  | 1.1       | 0.20 | 1.670                    | 0           | 67.0 | 38.7                                      | 128       |              |          |      |
| 4-Nitrophenol              | 2.3       | 0.25 | 3.330                    | 0           | 69.5 | 40.2                                      | 103       |              |          |      |
| Pentachlorophenol          | 1.6       | 0.40 | 3.330                    | 0           | 48.2 | 32.9                                      | 94        |              |          |      |
| Phenol                     | 2.6       | 0.20 | 3.330                    | 0           | 78.0 | 44.1                                      | 109       |              |          |      |
| Pyrene                     | 1.3       | 0.20 | 1.670                    | 0           | 76.5 | 51.9                                      | 109       |              |          |      |
| 1,2,4-Trichlorobenzene     | 1.1       | 0.20 | 1.670                    | 0           | 64.9 | 49.5                                      | 115       |              |          |      |
| Surr: 2-Fluorophenol       | 2.4       |      | 3.330                    |             | 71.4 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.5       |      | 3.330                    |             | 75.3 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.3       |      | 3.330                    |             | 68.4 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |      | 1.670                    |             | 77.7 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 75.7 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.5       |      | 1.670                    |             | 87.6 | 39.4                                      | 107       |              |          |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B77

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | MB-15733  |       | SampType: MBLK           |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | PBS       |       | Batch ID: 15733          |             | RunNo: 21721                       |          |              |      |          |      |
| Prep Date: | 10/6/2014 |       | Analysis Date: 10/7/2014 |             | SeqNo: 637703                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercurv    | ND        | 0.033 |                          |             |                                    |          |              |      |          |      |

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | LCS-15733 |       | SampType: LCS            |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | LCSS      |       | Batch ID: 15733          |             | RunNo: 21721                       |          |              |      |          |      |
| Prep Date: | 10/6/2014 |       | Analysis Date: 10/7/2014 |             | SeqNo: 637704                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercury    | 0.17      | 0.033 | 0.1667                   | 0           | 101                                | 80       | 120          |      |          |      |

|            |                    |       |                          |             |                                    |          |                  |      |          |      |
|------------|--------------------|-------|--------------------------|-------------|------------------------------------|----------|------------------|------|----------|------|
| Sample ID  | 1409B77-001BMS     |       | SampType: MS             |             | TestCode: EPA Method 7471: Mercury |          |                  |      |          |      |
| Client ID: | SWMU 13-1 (0.5-2') |       | Batch ID: 15733          |             | RunNo: 21721                       |          |                  |      |          |      |
| Prep Date: | 10/6/2014          |       | Analysis Date: 10/7/2014 |             | SeqNo: 637708                      |          | Units: mg/Kg-dry |      |          |      |
| Analyte    | Result             | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Mercury    | 0.21               | 0.037 | 0.1848                   | 0.01082     | 106                                | 75       | 125              |      |          |      |

|            |                    |       |                |             |       |          |           |                          |                  |      |  |
|------------|--------------------|-------|----------------|-------------|-------|----------|-----------|--------------------------|------------------|------|--|
| Sample ID  | 1409B77-001BMSD    |       |                | SampType:   | MSD   |          | TestCode: | EPA Method 7471: Mercury |                  |      |  |
| Client ID: | SWMU 13-1 (0.5-2') |       |                | Batch ID:   | 15733 |          | RunNo:    | 21721                    |                  |      |  |
| Prep Date: | 10/6/2014          |       | Analysis Date: | 10/7/2014   |       | SeqNo:   | 637709    |                          | Units: mg/Kg-dry |      |  |
| Analyte    | Result             | PQL   | SPK value      | SPK Ref Val | %REC  | LowLimit | HighLimit | %RPD                     | RPDLimit         | Qual |  |
| Mercury    | 0.20               | 0.036 | 0.1839         | 0.01082     | 101   | 75       | 125       | 4.63                     | 20               |      |  |

### Qualifiers:

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J Analyte detected below quantitation limits  
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S Spike Recovery outside accepted recovery limits

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

# Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409B77

RcptNo: 1

Received by/date:

LM 09/24/14

Logged By: Anne Thorne

9/24/2014 8:30:00 AM



Completed By: Anne Thorne

9/24/2014



Reviewed By:

CS

09/24/14

## Chain of Custody

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

## Log In

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

# of preserved  
bottles checked  
for pH:

(&lt;2 or &gt;12 unless noted)

Adjusted?

Checked by:

## Special Handling (if applicable)

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

Person Notified:

Date

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

## 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.1     | Good      | Yes         |         |           |           |



# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                    | Analytical Method              |
|----------------------------|--------------------------------|
| Antimony                   | SW-846 method 6010/6020        |
| Arsenic                    | SW-846 method 6010/6020        |
| Barium                     | SW-846 method 6010/6020        |
| Beryllium                  | SW-846 method 6010/6020        |
| Cadmium                    | SW-846 method 6010/6020        |
| Chromium                   | SW-846 method 6010/6020        |
| <del>Chromium VI</del>     | <del>SW-846 Method 3060A</del> |
| Cobalt                     | SW-846 method 6010/6020        |
| Cyanide                    | SW-846 method 335.4/335.2 mod  |
| Lead                       | SW-846 method 6010/6020        |
| <del>Tetraethyl lead</del> | <del>SW-846 method 8270C</del> |
| Mercury                    | SW-846 method 7470/7471        |
| Nickel                     | SW-846 method 6010/6020        |
| Selenium                   | SW-846 method 6010/6020        |
| Silver                     | SW-846 method 6010/6020        |
| Vanadium                   | SW-846 method 6010/6020        |
| Zinc                       | SW-846 method 6010/6020        |



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

October 20, 2014

Kelly Robinson

Western Refining Southwest, Inc.  
#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409B79

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/24/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109





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

## Case Narrative

WO#: 1409B79  
Date: 10/20/2014

---

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

---

Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B79**

Date Reported: **10/20/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 (6-8")

**Project:** GROUP 9

**Collection Date:** 9/18/2014 4:10:00 PM

**Lab ID:** 1409B79-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 9/29/2014 4:47:27 PM  | 15526                |
| Motor Oil Range Organics (MRO)                 | ND     | 56       |      | mg/Kg-dry | 1  | 9/29/2014 4:47:27 PM  | 15526                |
| Surr: DNOP                                     | 107    | 57.9-140 |      | %REC      | 1  | 9/29/2014 4:47:27 PM  | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.4      |      | mg/Kg-dry | 1  | 9/27/2014 1:30:04 AM  | R21487               |
| Surr: BFB                                      | 86.7   | 80-120   |      | %REC      | 1  | 9/27/2014 1:30:04 AM  | R21487               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 12     | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 10/2/2014 12:57:08 PM | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 5.6      |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Arsenic                                        | ND     | 5.6      |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Barium                                         | 160    | 0.22     |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Beryllium                                      | 0.78   | 0.33     |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Cadmium                                        | ND     | 0.22     |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Chromium                                       | 10     | 0.67     |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Cobalt                                         | 6.8    | 0.67     |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Lead                                           | 6.3    | 0.56     |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Nickel                                         | 10     | 1.1      |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Selenium                                       | ND     | 5.6      |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Silver                                         | ND     | 0.56     |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Vanadium                                       | 31     | 5.6      |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| Zinc                                           | 47     | 5.6      |      | mg/Kg-dry | 2  | 10/3/2014 11:56:07 AM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |
| Benzoic acid                                   | ND     | 0.57     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B79

Date Reported: 10/20/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 (6-8')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 4:10:00 PM

**Lab ID:** 1409B79-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 4-Chloroaniline                        | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.46 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.46 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| Isophorone                             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 1-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |
| 2-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483        |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 3 of 23 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B79

Date Reported: 10/20/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-4 (6-8")

Project: GROUP 9

Collection Date: 9/18/2014 4:10:00 PM

Lab ID: 1409B79-001

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|-----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                       | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 0.57      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| 3+4-Methylphenol                       | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| N-Nitrosodi-n-propylamine              | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| N-Nitrosodiphenylamine                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Naphthalene                            | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| 2-Nitroaniline                         | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| 3-Nitroaniline                         | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| 4-Nitroaniline                         | ND      | 0.46      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Nitrobenzene                           | ND      | 0.57      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| 2-Nitrophenol                          | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| 4-Nitrophenol                          | ND      | 0.29      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Pentachlorophenol                      | ND      | 0.46      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Phenanthrene                           | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Phenol                                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Pyrene                                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Pyridine                               | ND      | 0.57      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| 2,4,5-Trichlorophenol                  | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| 2,4,6-Trichlorophenol                  | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Surr: 2-Fluorophenol                   | 70.9    | 21-111    |      | %REC      | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Surr: Phenol-d5                        | 75.2    | 23.1-117  |      | %REC      | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Surr: 2,4,6-Tribromophenol             | 60.6    | 22.7-88.9 |      | %REC      | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Surr: Nitrobenzene-d5                  | 76.5    | 24.5-126  |      | %REC      | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Surr: 2-Fluorobiphenyl                 | 67.7    | 21.2-129  |      | %REC      | 1  | 9/25/2014 10:23:25 PM | 15483         |
| Surr: 4-Terphenyl-d14                  | 67.1    | 39.4-107  |      | %REC      | 1  | 9/25/2014 10:23:25 PM | 15483         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                       | Analyst: cadg |
| Benzene                                | ND      | 0.00194   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| Toluene                                | ND      | 0.00194   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| Ethylbenzene                           | ND      | 0.00194   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| Xylenes, Total                         | ND      | 0.00194   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00194   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| 1,2,4-Trimethylbenzene                 | ND      | 0.00194   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00194   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00194   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00194   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| Naphthalene                            | 0.00199 | 0.00194   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| 1-Methylnaphthalene                    | ND      | 0.00387   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| 2-Methylnaphthalene                    | ND      | 0.00387   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |
| Acetone                                | 0.0883  | 0.00968   |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM  | 15499         |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 4 of 23 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B79

Date Reported: 10/20/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-4 (6-8")

Project: GROUP 9

Collection Date: 9/18/2014 4:10:00 PM

Lab ID: 1409B79-001

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Bromodichloromethane                   | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Bromoform                              | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Bromomethane                           | ND     | 0.00290 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 2-Butanone                             | 0.0243 | 0.00968 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Carbon tetrachloride                   | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Chlorobenzene                          | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Chloroethane                           | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Chloroform                             | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Chloromethane                          | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 2-Chlorotoluene                        | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Carbon disulfide                       | ND     | 0.00968 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 4-Chlorotoluene                        | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| cis-1,2-DCE                            | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| cis-1,3-Dichloropropene                | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Dibromochloromethane                   | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Dibromomethane                         | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,2-Dichlorobenzene                    | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,3-Dichlorobenzene                    | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,4-Dichlorobenzene                    | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Dichlorodifluoromethane                | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,1-Dichloroethane                     | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,1-Dichloroethene                     | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,2-Dichloropropane                    | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,3-Dichloropropane                    | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 2,2-Dichloropropane                    | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,1-Dichloropropene                    | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Hexachlorobutadiene                    | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Isopropylbenzene                       | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 4-Isopropyltoluene                     | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Methylene chloride                     | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| n-Butylbenzene                         | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 2-Hexanone                             | ND     | 0.00968 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| n-Propylbenzene                        | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| sec-Butylbenzene                       | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Styrene                                | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 4-Methyl-2-pentanone                   | ND     | 0.00968 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| tert-Butylbenzene                      | ND     | 0.00194 |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 5 of 23 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B79

Date Reported: 10/20/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-4 (6-8')

Project: GROUP 9

Collection Date: 9/18/2014 4:10:00 PM

Lab ID: 1409B79-001

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Tetrachloroethene (PCE)                | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| trans-1,2-DCE                          | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| trans-1,3-Dichloropropene              | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,1,1-Trichloroethane                  | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,1,2-Trichloroethane                  | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Trichloroethene (TCE)                  | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Trichlorofluoromethane                 | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| 1,2,3-Trichloropropane                 | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Vinyl chloride                         | ND     | 0.00194  |      | mg/Kg-dry | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Surr: 1,2-Dichloroethane-d4            | 114    | 70-130   |      | %REC      | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Surr: 4-Bromofluorobenzene             | 90.3   | 65.3-135 |      | %REC      | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Surr: Dibromofluoromethane             | 108    | 70-130   |      | %REC      | 1  | 9/25/2014 5:20:02 PM | 15499         |
| Surr: Toluene-d8                       | 97.6   | 70-130   |      | %REC      | 1  | 9/25/2014 5:20:02 PM | 15499         |

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

|             |   |                                                 |    |                                                    |              |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 23 |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B79**

Date Reported: **10/20/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 4:15:00 PM

**Lab ID:** 1409B79-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 67     | 10       |      | mg/Kg-dry | 1  | 9/29/2014 5:08:50 PM  | 15526                |
| Motor Oil Range Organics (MRO)                 | ND     | 51       |      | mg/Kg-dry | 1  | 9/29/2014 5:08:50 PM  | 15526                |
| Surr: DNOP                                     | 98.1   | 57.9-140 |      | %REC      | 1  | 9/29/2014 5:08:50 PM  | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 7.1    | 3.4      |      | mg/Kg-dry | 1  | 9/27/2014 3:27:27 PM  | R21498               |
| Surr: BFB                                      | 205    | 80-120   | S    | %REC      | 1  | 9/27/2014 3:27:27 PM  | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 3.0    | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.033    |      | mg/Kg-dry | 1  | 10/2/2014 12:58:57 PM | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 4.9      |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Arsenic                                        | ND     | 4.9      |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Barium                                         | 290    | 0.20     |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Beryllium                                      | ND     | 0.30     |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Cadmium                                        | ND     | 0.20     |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Chromium                                       | 1.1    | 0.59     |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Cobalt                                         | 4.5    | 0.59     |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Lead                                           | 3.4    | 0.49     |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Nickel                                         | 2.3    | 0.98     |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Selenium                                       | ND     | 4.9      |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Silver                                         | ND     | 0.49     |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Vanadium                                       | 21     | 4.9      |      | mg/Kg-dry | 2  | 10/1/2014 3:04:51 PM  | 15559                |
| Zinc                                           | 20     | 4.9      |      | mg/Kg-dry | 2  | 10/2/2014 12:57:51 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B79

Date Reported: 10/20/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 4:15:00 PM

**Lab ID:** 1409B79-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 1-Methylnaphthalene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2-Methylnaphthalene                    | 0.26   | 0.21 |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B79

Date Reported: 10/20/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-4 (18-20')

Project: GROUP 9

Collection Date: 9/18/2014 4:15:00 PM

Lab ID: 1409B79-002

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Naphthalene                            | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 4-Nitroaniline                         | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Pentachlorophenol                      | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Phenanthrene                           | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Surr: 2-Fluorophenol                   | 59.0   | 21-111    |      | %REC      | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Surr: Phenol-d5                        | 64.6   | 23.1-117  |      | %REC      | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Surr: 2,4,6-Tribromophenol             | 63.0   | 22.7-88.9 |      | %REC      | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Surr: Nitrobenzene-d5                  | 65.0   | 24.5-126  |      | %REC      | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Surr: 2-Fluorobiphenyl                 | 67.3   | 21.2-129  |      | %REC      | 1  | 9/25/2014 10:51:11 PM | 15483        |
| Surr: 4-Terphenyl-d14                  | 69.1   | 39.4-107  |      | %REC      | 1  | 9/25/2014 10:51:11 PM | 15483        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                       | Analyst: RAA |
| Benzene                                | ND     | 0.034     |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| Toluene                                | ND     | 0.034     |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| Ethylbenzene                           | ND     | 0.034     |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.034     |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.034     |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.034     |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.034     |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.034     |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| Naphthalene                            | 0.19   | 0.068     |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| 1-Methylnaphthalene                    | 0.81   | 0.14      |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| 2-Methylnaphthalene                    | 1.4    | 0.14      |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| Acetone                                | ND     | 0.51      |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |
| Bromobenzene                           | ND     | 0.034     |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM  | 15490        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B79

Date Reported: 10/20/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 4:15:00 PM

**Lab ID:** 1409B79-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|-------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Bromoform                          | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Bromomethane                       | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 2-Butanone                         | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Carbon disulfide                   | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Carbon tetrachloride               | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Chlorobenzene                      | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Chloroethane                       | ND     | 0.068 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Chloroform                         | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Chloromethane                      | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 2-Chlorotoluene                    | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 4-Chlorotoluene                    | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| cis-1,2-DCE                        | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| cis-1,3-Dichloropropene            | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.068 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Dibromochloromethane               | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Dibromomethane                     | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 1,2-Dichlorobenzene                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 1,3-Dichlorobenzene                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 1,4-Dichlorobenzene                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Dichlorodifluoromethane            | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 1,1-Dichloroethane                 | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 1,1-Dichloroethene                 | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 1,2-Dichloropropane                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 1,3-Dichloropropane                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 2,2-Dichloropropane                | ND     | 0.068 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 1,1-Dichloropropene                | ND     | 0.068 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Hexachlorobutadiene                | ND     | 0.068 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 2-Hexanone                         | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Isopropylbenzene                   | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 4-Isopropyltoluene                 | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 4-Methyl-2-pentanone               | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Methylene chloride                 | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| n-Butylbenzene                     | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| n-Propylbenzene                    | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| sec-Butylbenzene                   | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| Styrene                            | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| tert-Butylbenzene                  | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/30/2014 4:08:32 AM | 15490        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B79**

Date Reported: **10/20/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 4:15:00 PM

**Lab ID:** 1409B79-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |       |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| Tetrachloroethene (PCE)            | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| trans-1,2-DCE                      | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| trans-1,3-Dichloropropene          | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| 1,2,3-Trichlorobenzene             | ND     | 0.068  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| 1,2,4-Trichlorobenzene             | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| 1,1,1-Trichloroethane              | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| 1,1,2-Trichloroethane              | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| Trichloroethene (TCE)              | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| Trichlorofluoromethane             | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| 1,2,3-Trichloropropane             | ND     | 0.068  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| Vinyl chloride                     | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| Xylenes, Total                     | ND     | 0.068  |      | mg/Kg-dry           | 1  | 9/30/2014 4:08:32 AM | 15490 |
| Surr: Dibromofluoromethane         | 73.6   | 70-130 |      | %REC                | 1  | 9/30/2014 4:08:32 AM | 15490 |
| Surr: 1,2-Dichloroethane-d4        | 76.9   | 70-130 |      | %REC                | 1  | 9/30/2014 4:08:32 AM | 15490 |
| Surr: Toluene-d8                   | 90.2   | 70-130 |      | %REC                | 1  | 9/30/2014 4:08:32 AM | 15490 |
| Surr: 4-Bromofluorobenzene         | 96.5   | 70-130 |      | %REC                | 1  | 9/30/2014 4:08:32 AM | 15490 |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 11 of 23 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Anatek Labs, Inc.

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

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

**Batch #:** 140925060  
**Project Name:** 1409B79

## Analytical Results Report

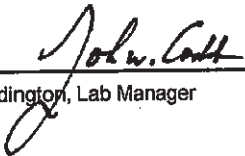
**Sample Number** 140925060-001 **Sampling Date** 9/18/2014 **Date/Time Received** 9/25/2014 12:50 PM  
**Client Sample ID** 1409B79-001C / SWMU 14-4 (6-8) **Sampling Time** 4:10 PM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.261 | 10/2/2014     | CRW     | EPA 335.4 |           |
| %moisture | 10.3   | Percent |       | 9/30/2014     | KJS     | %moisture |           |

**Sample Number** 140925060-002 **Sampling Date** 9/18/2014 **Date/Time Received** 9/25/2014 12:50 PM  
**Client Sample ID** 1409B79-002C / SWMU 14-4 (8-10) **Sampling Time** 4:15 PM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.235 | 10/2/2014     | CRW     | EPA 335.4 |           |
| %moisture | 3.2    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

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

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

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

Monday, October 13, 2014

Page 1 of 1

# Anatek Labs, Inc.

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

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB **Batch #:** 140925060  
**Address:** 4901 HAWKINS NE SUITE D **Project Name:** 1409B79  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|-----------|---------------|
| Cyanide   | 0.500      | mg/kg | 0.5       | 100.0 | 90-110  | 10/2/2014 | 10/2/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|-------|---------|-----------|---------------|
| 140925060-001 | Cyanide   | ND            | 13.1      | mg/kg | 13.1     | 100.0 | 90-110  | 10/2/2014 | 10/2/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 12.9       | mg/kg | 13.1      | 98.5 | 1.5  | 0-25    | 10/2/2014 | 10/2/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/2/2014 | 10/2/2014     |

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

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:Cert0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0085; FL(NELAP): E871099

Monday, October 13, 2014

Page 1 of 1

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |     |                          |             |                                            |          |             |      |          |      |
|------------|-----------|-----|--------------------------|-------------|--------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB-15490  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID: | PBS       |     | Batch ID: 15490          |             | RunNo: 21449                               |          |             |      |          |      |
| Prep Date: | 9/24/2014 |     | Analysis Date: 9/25/2014 |             | SeqNo: 627618                              |          | Units: %REC |      |          |      |
| Analyte    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: BFB  | 880       |     | 1000                     |             | 87.7                                       | 80       | 120         |      |          |      |

|            |           |     |                          |             |                                            |          |             |      |          |      |
|------------|-----------|-----|--------------------------|-------------|--------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS-15490 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID: | LCSS      |     | Batch ID: 15490          |             | RunNo: 21449                               |          |             |      |          |      |
| Prep Date: | 9/24/2014 |     | Analysis Date: 9/25/2014 |             | SeqNo: 627619                              |          | Units: %REC |      |          |      |
| Analyte    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: BFB  | 980       |     | 1000                     |             | 98.0                                       | 80       | 120         |      |          |      |

|                               |        |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|--------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 5ML RB |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | PBS    |     | Batch ID: R21487         |             | RunNo: 21487                               |          |              |      |          |      |
| Prep Date:                    |        |     | Analysis Date: 9/26/2014 |             | SeqNo: 628754                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND     | 5.0 |                          |             |                                            |          |              |      |          |      |
| Surr: BFB                     | 820    |     | 1000                     |             | 82.2                                       | 80       | 120          |      |          |      |

|                               |               |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|---------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS          |     | Batch ID: R21487         |             | RunNo: 21487                               |          |              |      |          |      |
| Prep Date:                    |               |     | Analysis Date: 9/26/2014 |             | SeqNo: 628755                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result        | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 23            | 5.0 | 25.00                    | 0           | 90.8                                       | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 900           |     | 1000                     |             | 90.4                                       | 80       | 120          |      |          |      |

|                               |        |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|--------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 5ML RB |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | PBS    |     | Batch ID: R21498         |             | RunNo: 21498                               |          |              |      |          |      |
| Prep Date:                    |        |     | Analysis Date: 9/27/2014 |             | SeqNo: 628838                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND     | 5.0 |                          |             |                                            |          |              |      |          |      |
| Surr: BFB                     | 870    |     | 1000                     |             | 86.8                                       | 80       | 120          |      |          |      |

|                               |               |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|---------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS          |     | Batch ID: R21498         |             | RunNo: 21498                               |          |              |      |          |      |
| Prep Date:                    |               |     | Analysis Date: 9/27/2014 |             | SeqNo: 628839                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result        | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24            | 5.0 | 25.00                    | 0           | 96.5                                       | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 960           |     | 1000                     |             | 96.3                                       | 80       | 120          |      |          |      |

### Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                               |                    |                |           |             |                                  |          |           |      |          |      |
|-------------------------------|--------------------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID                     | 1409B79-002AMS     | SampType:      | MS        | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID:                    | SWMU 14-4 (18-20') | Batch ID:      | R21498    | RunNo:      | 21498                            |          |           |      |          |      |
| Prep Date:                    |                    | Analysis Date: | 9/27/2014 | SeqNo:      | 628843                           | Units:   | mg/Kg-dry |      |          |      |
| Analyte                       | Result             | PQL            | SPK value | SPK Ref Val | %REC                             | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 25                 | 3.4            | 17.00     | 7.093       | 104                              | 71.8     | 132       |      |          |      |
| Surr: BFB                     | 1500               |                | 680.0     |             | 226                              | 80       | 120       |      |          | S    |

|                               |                    |                |           |             |                                  |          |           |      |          |      |
|-------------------------------|--------------------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID                     | 1409B79-002AMSD    | SampType:      | MSD       | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID:                    | SWMU 14-4 (18-20') | Batch ID:      | R21498    | RunNo:      | 21498                            |          |           |      |          |      |
| Prep Date:                    |                    | Analysis Date: | 9/27/2014 | SeqNo:      | 628844                           | Units:   | mg/Kg-dry |      |          |      |
| Analyte                       | Result             | PQL            | SPK value | SPK Ref Val | %REC                             | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 23                 | 3.4            | 17.00     | 7.093       | 92.4                             | 71.8     | 132       | 7.99 | 20       |      |
| Surr: BFB                     | 1500               |                | 680.0     |             | 226                              | 80       | 120       | 0    | 0        | S    |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |       |                          |             |      |                                       |           |              |          |      |
|--------------------------------|-----------|-------|--------------------------|-------------|------|---------------------------------------|-----------|--------------|----------|------|
| Sample ID                      | mb-15490  |       | SampType: MBLK           |             |      | TestCode: EPA Method 8260B: Volatiles |           |              |          |      |
| Client ID:                     | PBS       |       | Batch ID: 15490          |             |      | RunNo: 21541                          |           |              |          |      |
| Prep Date:                     | 9/24/2014 |       | Analysis Date: 9/30/2014 |             |      | SeqNo: 630675                         |           | Units: mg/Kg |          |      |
| Analyte                        | Result    | PQL   | SPK value                | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD         | RPDLimit | Qual |
| Benzene                        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Toluene                        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Ethylbenzene                   | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Naphthalene                    | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |
| 1-Methylnaphthalene            | ND        | 0.20  |                          |             |      |                                       |           |              |          |      |
| 2-Methylnaphthalene            | ND        | 0.20  |                          |             |      |                                       |           |              |          |      |
| Acetone                        | ND        | 0.75  |                          |             |      |                                       |           |              |          |      |
| Bromobenzene                   | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Bromodichloromethane           | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Bromoform                      | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Bromomethane                   | ND        | 0.15  |                          |             |      |                                       |           |              |          |      |
| 2-Butanone                     | ND        | 0.50  |                          |             |      |                                       |           |              |          |      |
| Carbon disulfide               | ND        | 0.50  |                          |             |      |                                       |           |              |          |      |
| Carbon tetrachloride           | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Chlorobenzene                  | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Chloroethane                   | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |
| Chloroform                     | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Chloromethane                  | ND        | 0.15  |                          |             |      |                                       |           |              |          |      |
| 2-Chlorotoluene                | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 4-Chlorotoluene                | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| cis-1,2-DCE                    | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |
| Dibromochloromethane           | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Dibromomethane                 | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Dichlorodifluoromethane        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,1-Dichloroethane             | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,1-Dichloroethene             | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dichloropropane            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,3-Dichloropropane            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 2,2-Dichloropropane            | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |       |                |                  |      |           |                                    |      |                     |      |
|-----------------------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID                   | <b>mb-15490</b>  |       | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:                  | <b>PBS</b>       |       | Batch ID:      | <b>15490</b>     |      | RunNo:    | <b>21541</b>                       |      |                     |      |
| Prep Date:                  | <b>9/24/2014</b> |       | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>630675</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| 1,1-Dichloropropene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 2-Hexanone                  | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Isopropylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Methylene chloride          | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Butylbenzene              | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Propylbenzene             | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| sec-Butylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Styrene                     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| tert-Butylbenzene           | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,2-DCE               | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Vinyl chloride              | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Xylenes, Total              | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.40             |       | 0.5000         |                  | 79.5 | 70        | 130                                |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.43             |       | 0.5000         |                  | 85.8 | 70        | 130                                |      |                     |      |
| Surr: Toluene-d8            | 0.44             |       | 0.5000         |                  | 87.7 | 70        | 130                                |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.40             |       | 0.5000         |                  | 80.8 | 70        | 130                                |      |                     |      |

|               |                  |       |                |                  |      |           |                                    |      |                     |      |
|---------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID     | <b>lcs-15490</b> |       | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:    | <b>LCSS</b>      |       | Batch ID:      | <b>15490</b>     |      | RunNo:    | <b>21541</b>                       |      |                     |      |
| Prep Date:    | <b>9/24/2014</b> |       | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>630676</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| Benzene       | 0.93             | 0.050 | 1.000          | 0                | 92.8 | 70        | 130                                |      |                     |      |
| Toluene       | 0.87             | 0.050 | 1.000          | 0                | 86.6 | 70        | 130                                |      |                     |      |
| Chlorobenzene | 0.90             | 0.050 | 1.000          | 0                | 90.1 | 70        | 130                                |      |                     |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |       |                          |             |      |                                       |           |              |          |      |
|-----------------------------|-----------|-------|--------------------------|-------------|------|---------------------------------------|-----------|--------------|----------|------|
| Sample ID                   | Ics-15490 |       | SampType: LCS            |             |      | TestCode: EPA Method 8260B: Volatiles |           |              |          |      |
| Client ID:                  | LCSS      |       | Batch ID: 15490          |             |      | RunNo: 21541                          |           |              |          |      |
| Prep Date:                  | 9/24/2014 |       | Analysis Date: 9/30/2014 |             |      | SeqNo: 630676                         |           | Units: mg/Kg |          |      |
| Analyte                     | Result    | PQL   | SPK value                | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD         | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.92      | 0.050 | 1.000                    | 0           | 92.0 | 60.5                                  | 160       |              |          |      |
| Trichloroethene (TCE)       | 0.93      | 0.050 | 1.000                    | 0           | 93.1 | 58.8                                  | 139       |              |          |      |
| Surr: Dibromofluoromethane  | 0.41      |       | 0.5000                   |             | 82.3 | 70                                    | 130       |              |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.44      |       | 0.5000                   |             | 88.7 | 70                                    | 130       |              |          |      |
| Surr: Toluene-d8            | 0.43      |       | 0.5000                   |             | 85.3 | 70                                    | 130       |              |          |      |
| Surr: 4-Bromofluorobenzene  | 0.44      |       | 0.5000                   |             | 88.2 | 70                                    | 130       |              |          |      |

### Qualifiers:

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |         |                          |             |                                           |          |              |      |          |      |
|--------------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15499  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                     | PBS       |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                     | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627937                             |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Toluene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Xylenes, Total                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| Acetone                        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromoform                      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromomethane                   | ND        | 0.00300 |                          |             |                                           |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroform                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloromethane                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15499  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | PBS       |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627937                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 2,2-Dichloropropane         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloropropene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Hexachlorobutadiene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Isopropylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Isopropyltoluene          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methylene chloride          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| n-Butylbenzene              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Hexanone                  | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| n-Propylbenzene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| sec-Butylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Styrene                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Methyl-2-pentanone        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| tert-Butylbenzene           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Tetrachloroethene (PCE)     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,2-DCE               | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,3-Dichloropropene   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichloroethene (TCE)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichlorofluoromethane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichloropropane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Vinyl chloride              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0207    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0235    |         | 0.02000                  |             | 117                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0206    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0199    |         | 0.02000                  |             | 99.7                                      | 70       | 130          |      |          |      |

|               |           |         |                          |             |                                           |          |              |      |          |      |
|---------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID     | LCS-15499 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:    | LCSS      |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:    | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627939                             |          | Units: mg/Kg |      |          |      |
| Analyte       | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Toluene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Chlorobenzene | 0.0103    | 0.00200 | 0.01000                  | 0           | 103                                       | 70       | 130          |      |          |      |

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O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15499 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | LCSS      |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627939                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.00912   | 0.00200 | 0.01000                  | 0           | 91.2                                      | 70       | 130          |      |          |      |
| Trichloroethene (TCE)       | 0.00988   | 0.00200 | 0.01000                  | 0           | 98.8                                      | 61.6     | 131          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0213    |         | 0.02000                  |             | 107                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0228    |         | 0.02000                  |             | 114                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0201    |         | 0.02000                  |             | 101                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0201    |         | 0.02000                  |             | 100                                       | 70       | 130          |      |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |      |                          |             |      |                                           |           |              |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                   | mb-15483  |      | SampType: MBLK           |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15483          |             |      | RunNo: 21456                              |           |              |          |      |
| Prep Date:                  | 9/24/2014 |      | Analysis Date: 9/25/2014 |             |      | SeqNo: 627716                             |           | Units: mg/Kg |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Aniline                     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |      |                                           |           |              |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |      |                                           |           |              |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |      |                                           |           |              |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |      |                                           |           |              |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |      |                                           |           |              |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |

### Qualifiers:

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P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15483  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 15483     | RunNo:      | 21456                           |          |           |      |          |      |
| Prep Date:                 | 9/24/2014 | Analysis Date: | 9/25/2014 | SeqNo:      | 627716                          | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 2.2       |                | 3.330     |             | 66.7                            | 21       | 111       |      |          |      |
| Surr: Phenol-d5            | 2.2       |                | 3.330     |             | 67.5                            | 23.1     | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.9       |                | 3.330     |             | 57.0                            | 22.7     | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5      | 1.2       |                | 1.670     |             | 72.7                            | 24.5     | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.1       |                | 1.670     |             | 67.2                            | 21.2     | 129       |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |                | 1.670     |             | 77.9                            | 39.4     | 107       |      |          |      |

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S Spike Recovery outside accepted recovery limits

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RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | lcs-15483 |      | SampType: LCS            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15483          |             |      | RunNo: 21456                              |           |              |          |      |
| Prep Date:                 | 9/24/2014 |      | Analysis Date: 9/25/2014 |             |      | SeqNo: 627717                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Acenaphthene               | 1.2       | 0.20 | 1.670                    | 0           | 71.4 | 50.7                                      | 110       |              |          |      |
| 4-Chloro-3-methylphenol    | 2.7       | 0.50 | 3.330                    | 0           | 81.5 | 47.8                                      | 107       |              |          |      |
| 2-Chlorophenol             | 2.7       | 0.20 | 3.330                    | 0           | 80.1 | 45.7                                      | 108       |              |          |      |
| 1,4-Dichlorobenzene        | 1.1       | 0.20 | 1.670                    | 0           | 66.3 | 46.1                                      | 112       |              |          |      |
| 2,4-Dinitrotoluene         | 0.99      | 0.50 | 1.670                    | 0           | 59.0 | 44.9                                      | 114       |              |          |      |
| N-Nitrosodi-n-propylamine  | 1.1       | 0.20 | 1.670                    | 0           | 67.0 | 38.7                                      | 128       |              |          |      |
| 4-Nitrophenol              | 2.3       | 0.25 | 3.330                    | 0           | 69.5 | 40.2                                      | 103       |              |          |      |
| Pentachlorophenol          | 1.6       | 0.40 | 3.330                    | 0           | 48.2 | 32.9                                      | 94        |              |          |      |
| Phenol                     | 2.6       | 0.20 | 3.330                    | 0           | 78.0 | 44.1                                      | 109       |              |          |      |
| Pyrene                     | 1.3       | 0.20 | 1.670                    | 0           | 76.5 | 51.9                                      | 109       |              |          |      |
| 1,2,4-Trichlorobenzene     | 1.1       | 0.20 | 1.670                    | 0           | 64.9 | 49.5                                      | 115       |              |          |      |
| Surr: 2-Fluorophenol       | 2.4       |      | 3.330                    |             | 71.4 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.5       |      | 3.330                    |             | 75.3 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.3       |      | 3.330                    |             | 68.4 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |      | 1.670                    |             | 77.7 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 75.7 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.5       |      | 1.670                    |             | 87.6 | 39.4                                      | 107       |              |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B79

20-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | MB-15593  |       | SampType: MBLK           |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | PBS       |       | Batch ID: 15593          |             | RunNo: 21606                       |          |              |      |          |      |
| Prep Date: | 9/29/2014 |       | Analysis Date: 10/2/2014 |             | SeqNo: 633786                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercury    | ND        | 0.033 |                          |             |                                    |          |              |      |          |      |

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | LCS-15593 |       | SampType: LCS            |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | LCSS      |       | Batch ID: 15593          |             | RunNo: 21606                       |          |              |      |          |      |
| Prep Date: | 9/29/2014 |       | Analysis Date: 10/2/2014 |             | SeqNo: 633787                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercury    | 0.17      | 0.033 | 0.1667                   | 0           | 104                                | 80       | 120          |      |          |      |

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

## Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409B79

RcptNo: 1

Received by/date:

LMO 9/24/14

Logged By: Anne Thorne 9/24/2014 8:30:00 AM

*Anne Thorne*

Completed By: Anne Thorne 9/24/2014

*Anne Thorne*

Reviewed By:

CS

09/24/14

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.1     | Good      | Yes         |         |           |           |



# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                    | Analytical Method              |
|----------------------------|--------------------------------|
| Antimony                   | SW-846 method 6010/6020        |
| Arsenic                    | SW-846 method 6010/6020        |
| Barium                     | SW-846 method 6010/6020        |
| Beryllium                  | SW-846 method 6010/6020        |
| Cadmium                    | SW-846 method 6010/6020        |
| Chromium                   | SW-846 method 6010/6020        |
| <del>Chromium VI</del>     | <del>SW-846 Method 3060A</del> |
| Cobalt                     | SW-846 method 6010/6020        |
| Cyanide                    | SW-846 method 335.4/335.2 mod  |
| Lead                       | SW-846 method 6010/6020        |
| <del>Tetraethyl lead</del> | <del>SW-846 method 8270G</del> |
| Mercury                    | SW-846 method 7470/7471        |
| Nickel                     | SW-846 method 6010/6020        |
| Selenium                   | SW-846 method 6010/6020        |
| Silver                     | SW-846 method 6010/6020        |
| Vanadium                   | SW-846 method 6010/6020        |
| Zinc                       | SW-846 method 6010/6020        |





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

October 22, 2014

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409B80

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/24/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



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

## Case Narrative

WO#: 1409B80  
Date: 10/22/2014

---

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

---

Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 10:30:00 AM

**Lab ID:** 1409B80-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 83     | 11       |      | mg/Kg-dry | 1  | 9/29/2014 5:30:21 PM  | 15526                |
| Motor Oil Range Organics (MRO)                 | 58     | 56       |      | mg/Kg-dry | 1  | 9/29/2014 5:30:21 PM  | 15526                |
| Surr: DNOP                                     | 116    | 57.9-140 |      | %REC      | 1  | 9/29/2014 5:30:21 PM  | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 10     | 3.6      |      | mg/Kg-dry | 1  | 9/27/2014 5:28:04 PM  | R21498               |
| Surr: BFB                                      | 171    | 80-120   | S    | %REC      | 1  | 9/27/2014 5:28:04 PM  | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 9.7    | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.045  | 0.038    |      | mg/Kg-dry | 1  | 10/2/2014 1:04:29 PM  | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Arsenic                                        | 4.4    | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Barium                                         | 180    | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Beryllium                                      | 0.52   | 0.16     |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Chromium                                       | 16     | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Cobalt                                         | 4.8    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Lead                                           | 9.3    | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Nickel                                         | 7.2    | 0.55     |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Vanadium                                       | 27     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:57:19 PM  | 15559                |
| Zinc                                           | 49     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 12:59:09 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |
| Acenaphthylene                                 | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |
| Aniline                                        | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |
| Anthracene                                     | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |
| Azobenzene                                     | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |
| Benz(a)anthracene                              | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |
| Benzyl alcohol                                 | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 10:30:00 AM

**Lab ID:** 1409B80-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Carbazole                              | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.55 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 2-Chlorophenol                         | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Chrysene                               | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.89 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Dibenzofuran                           | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.55 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Diethyl phthalate                      | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Dimethyl phthalate                     | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.89 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.67 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Fluoranthene                           | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Fluorene                               | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Hexachlorobenzene                      | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Hexachloroethane                       | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 1-Methylnaphthalene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |
| 2-Methylnaphthalene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/25/2014 11:19:06 PM | 15483        |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 3 of 43 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 10:30:00 AM

**Lab ID:** 1409B80-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result  | RL        | Qual | Units                | DF | Date Analyzed         | Batch |
|----------------------------------------|---------|-----------|------|----------------------|----|-----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      | Analyst: <b>JDC</b>  |    |                       |       |
| 2-Methylphenol                         | ND      | 1.1       |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| 3+4-Methylphenol                       | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| N-Nitrosodi-n-propylamine              | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| N-Nitrosodiphenylamine                 | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Naphthalene                            | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| 2-Nitroaniline                         | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| 3-Nitroaniline                         | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| 4-Nitroaniline                         | ND      | 0.89      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Nitrobenzene                           | ND      | 1.1       |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| 2-Nitrophenol                          | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| 4-Nitrophenol                          | ND      | 0.55      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Pentachlorophenol                      | ND      | 0.89      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Phenanthrene                           | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Phenol                                 | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Pyrene                                 | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Pyridine                               | ND      | 1.1       |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| 1,2,4-Trichlorobenzene                 | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| 2,4,5-Trichlorophenol                  | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| 2,4,6-Trichlorophenol                  | ND      | 0.44      |      | mg/Kg-dry            | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Surr: 2-Fluorophenol                   | 55.7    | 21-111    |      | %REC                 | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Surr: Phenol-d5                        | 61.3    | 23.1-117  |      | %REC                 | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Surr: 2,4,6-Tribromophenol             | 46.5    | 22.7-88.9 |      | %REC                 | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Surr: Nitrobenzene-d5                  | 65.5    | 24.5-126  |      | %REC                 | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Surr: 2-Fluorobiphenyl                 | 65.9    | 21.2-129  |      | %REC                 | 1  | 9/25/2014 11:19:06 PM | 15483 |
| Surr: 4-Terphenyl-d14                  | 68.3    | 39.4-107  |      | %REC                 | 1  | 9/25/2014 11:19:06 PM | 15483 |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      | Analyst: <b>cadg</b> |    |                       |       |
| Benzene                                | 0.00353 | 0.00182   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| Toluene                                | 0.00224 | 0.00182   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| Ethylbenzene                           | 0.00342 | 0.00182   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| Xylenes, Total                         | 0.00235 | 0.00182   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00182   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| 1,2,4-Trimethylbenzene                 | 0.0119  | 0.00182   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| 1,3,5-Trimethylbenzene                 | 0.00295 | 0.00182   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00182   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00182   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| Naphthalene                            | ND      | 0.00182   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| 1-Methylnaphthalene                    | ND      | 0.00364   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| 2-Methylnaphthalene                    | ND      | 0.00364   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |
| Acetone                                | 0.0542  | 0.00909   |      | mg/Kg-dry            | 1  | 9/25/2014 5:48:45 PM  | 15499 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B80

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-18 (0-0.5')

Project: GROUP 9

Collection Date: 9/19/2014 10:30:00 AM

Lab ID: 1409B80-001

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result  | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Bromodichloromethane                   | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Bromoform                              | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Bromomethane                           | ND      | 0.00273 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 2-Butanone                             | 0.0104  | 0.00909 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Carbon tetrachloride                   | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Chlorobenzene                          | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Chloroethane                           | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Chloroform                             | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Chloromethane                          | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 2-Chlorotoluene                        | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Carbon disulfide                       | 0.0191  | 0.00909 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 4-Chlorotoluene                        | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| cis-1,2-DCE                            | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| cis-1,3-Dichloropropene                | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 1,2-Dibromo-3-chloropropane            | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Dibromochloromethane                   | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Dibromomethane                         | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 1,2-Dichlorobenzene                    | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 1,3-Dichlorobenzene                    | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 1,4-Dichlorobenzene                    | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Dichlorodifluoromethane                | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 1,1-Dichloroethane                     | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 1,1-Dichloroethene                     | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 1,2-Dichloropropane                    | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 1,3-Dichloropropane                    | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 2,2-Dichloropropane                    | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 1,1-Dichloropropene                    | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Hexachlorobutadiene                    | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Isopropylbenzene                       | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 4-Isopropyltoluene                     | 0.00202 | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Methylene chloride                     | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| n-Butylbenzene                         | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 2-Hexanone                             | ND      | 0.00909 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| n-Propylbenzene                        | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| sec-Butylbenzene                       | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| Styrene                                | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| 4-Methyl-2-pentanone                   | ND      | 0.00909 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |
| tert-Butylbenzene                      | ND      | 0.00182 |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 10:30:00 AM

**Lab ID:** 1409B80-001

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| Tetrachloroethene (PCE)                | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| trans-1,2-DCE                          | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| trans-1,3-Dichloropropene              | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| 1,1,1-Trichloroethane                  | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| 1,1,2-Trichloroethane                  | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| Trichloroethene (TCE)                  | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| Trichlorofluoromethane                 | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| 1,2,3-Trichloropropane                 | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| Vinyl chloride                         | ND     | 0.00182  |      | mg/Kg-dry | 1  | 9/25/2014 5:48:45 PM | 15499                |
| Surr: 1,2-Dichloroethane-d4            | 105    | 70-130   |      | %REC      | 1  | 9/25/2014 5:48:45 PM | 15499                |
| Surr: 4-Bromofluorobenzene             | 88.0   | 65.3-135 |      | %REC      | 1  | 9/25/2014 5:48:45 PM | 15499                |
| Surr: Dibromofluoromethane             | 96.3   | 70-130   |      | %REC      | 1  | 9/25/2014 5:48:45 PM | 15499                |
| Surr: Toluene-d8                       | 105    | 70-130   |      | %REC      | 1  | 9/25/2014 5:48:45 PM | 15499                |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 43 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 10:40:00 AM

**Lab ID:** 1409B80-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                      | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 150    | 11       |      | mg/Kg-dry | 1  | 9/29/2014 5:51:42 PM | 15526                |
| Motor Oil Range Organics (MRO)                 | 86     | 56       |      | mg/Kg-dry | 1  | 9/29/2014 5:51:42 PM | 15526                |
| Surr: DNOP                                     | 115    | 57.9-140 |      | %REC      | 1  | 9/29/2014 5:51:42 PM | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                      | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.5      |      | mg/Kg-dry | 1  | 9/27/2014 5:58:13 PM | R21498               |
| Surr: BFB                                      | 90.5   | 80-120   |      | %REC      | 1  | 9/27/2014 5:58:13 PM | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| Percent Moisture                               | 11     | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                      | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.038    |      | mg/Kg-dry | 1  | 10/2/2014 1:06:19 PM | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                      | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Arsenic                                        | 4.0    | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Barium                                         | 210    | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Beryllium                                      | 0.55   | 0.17     |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Chromium                                       | 13     | 0.34     |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Cobalt                                         | 5.1    | 0.34     |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Lead                                           | 7.5    | 0.28     |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Nickel                                         | 8.4    | 0.56     |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Vanadium                                       | 28     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:58:35 PM | 15559                |
| Zinc                                           | 47     | 2.8      |      | mg/Kg-dry | 1  | 10/2/2014 1:00:23 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                      | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |
| Benzoic acid                                   | ND     | 0.56     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 10:40:00 AM

**Lab ID:** 1409B80-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 4-Chloroaniline                        | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| Isophorone                             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483        |

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

|                    |                                                   |                                                      |              |
|--------------------|---------------------------------------------------|------------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    | Page 8 of 43 |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |              |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |              |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |              |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |              |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B80

Date Reported: 10/22/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 10:40:00 AM

**Lab ID:** 1409B80-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 0.56      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| 3+4-Methylphenol                       | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| N-Nitrosodi-n-propylamine              | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| N-Nitrosodiphenylamine                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Naphthalene                            | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| 2-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| 3-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| 4-Nitroaniline                         | ND      | 0.45      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Nitrobenzene                           | ND      | 0.56      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| 2-Nitrophenol                          | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| 4-Nitrophenol                          | ND      | 0.28      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Pentachlorophenol                      | ND      | 0.45      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Phenanthrene                           | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Phenol                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Pyrene                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Pyridine                               | ND      | 0.56      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| 2,4,5-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| 2,4,6-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Surr: 2-Fluorophenol                   | 55.1    | 21-111    |      | %REC      | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Surr: Phenol-d5                        | 59.8    | 23.1-117  |      | %REC      | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Surr: 2,4,6-Tribromophenol             | 45.9    | 22.7-88.9 |      | %REC      | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Surr: Nitrobenzene-d5                  | 62.8    | 24.5-126  |      | %REC      | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Surr: 2-Fluorobiphenyl                 | 62.7    | 21.2-129  |      | %REC      | 1  | 9/26/2014 2:34:10 AM | 15483         |
| Surr: 4-Terphenyl-d14                  | 61.2    | 39.4-107  |      | %REC      | 1  | 9/26/2014 2:34:10 AM | 15483         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | 0.00423 | 0.00196   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Toluene                                | 0.00205 | 0.00196   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Ethylbenzene                           | ND      | 0.00196   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Xylenes, Total                         | ND      | 0.00196   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00196   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,2,4-Trimethylbenzene                 | 0.00682 | 0.00196   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00196   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00196   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00196   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Naphthalene                            | ND      | 0.00196   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1-Methylnaphthalene                    | ND      | 0.00392   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 2-Methylnaphthalene                    | ND      | 0.00392   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Acetone                                | 0.144   | 0.00981   |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B80

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-18 (0.5-2')

Project: GROUP 9

Collection Date: 9/19/2014 10:40:00 AM

Lab ID: 1409B80-002

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Bromodichloromethane                   | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Bromoform                              | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Bromomethane                           | ND     | 0.00294 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 2-Butanone                             | 0.0349 | 0.00981 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Carbon tetrachloride                   | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Chlorobenzene                          | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Chloroethane                           | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Chloroform                             | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Chloromethane                          | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 2-Chlorotoluene                        | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Carbon disulfide                       | ND     | 0.00981 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 4-Chlorotoluene                        | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| cis-1,2-DCE                            | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| cis-1,3-Dichloropropene                | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Dibromochloromethane                   | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Dibromomethane                         | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,2-Dichlorobenzene                    | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,3-Dichlorobenzene                    | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,4-Dichlorobenzene                    | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Dichlorodifluoromethane                | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,1-Dichloroethane                     | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,1-Dichloroethene                     | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,2-Dichloropropane                    | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,3-Dichloropropane                    | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 2,2-Dichloropropane                    | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 1,1-Dichloropropene                    | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Hexachlorobutadiene                    | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Isopropylbenzene                       | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 4-Isopropyltoluene                     | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Methylene chloride                     | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| n-Butylbenzene                         | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 2-Hexanone                             | ND     | 0.00981 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| n-Propylbenzene                        | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| sec-Butylbenzene                       | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| Styrene                                | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| 4-Methyl-2-pentanone                   | ND     | 0.00981 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |
| tert-Butylbenzene                      | ND     | 0.00196 |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 10:40:00 AM

**Lab ID:** 1409B80-002

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| Tetrachloroethene (PCE)                | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| trans-1,2-DCE                          | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| trans-1,3-Dichloropropene              | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| 1,1,1-Trichloroethane                  | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| 1,1,2-Trichloroethane                  | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| Trichloroethene (TCE)                  | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| Trichlorofluoromethane                 | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| 1,2,3-Trichloropropane                 | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| Vinyl chloride                         | ND     | 0.00196  |      | mg/Kg-dry | 1  | 9/25/2014 6:17:27 PM | 15499                |
| Surr: 1,2-Dichloroethane-d4            | 115    | 70-130   |      | %REC      | 1  | 9/25/2014 6:17:27 PM | 15499                |
| Surr: 4-Bromofluorobenzene             | 89.0   | 65.3-135 |      | %REC      | 1  | 9/25/2014 6:17:27 PM | 15499                |
| Surr: Dibromofluoromethane             | 97.6   | 70-130   |      | %REC      | 1  | 9/25/2014 6:17:27 PM | 15499                |
| Surr: Toluene-d8                       | 100    | 70-130   |      | %REC      | 1  | 9/25/2014 6:17:27 PM | 15499                |

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

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (12-14')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 10:50:00 AM

**Lab ID:** 1409B80-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 12       |      | mg/Kg-dry | 1  | 9/29/2014 6:13:11 PM  | 15526                |
| Motor Oil Range Organics (MRO)                 | ND     | 58       |      | mg/Kg-dry | 1  | 9/29/2014 6:13:11 PM  | 15526                |
| Surr: DNOP                                     | 113    | 57.9-140 |      | %REC      | 1  | 9/29/2014 6:13:11 PM  | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.3      |      | mg/Kg-dry | 1  | 9/27/2014 6:28:22 PM  | R21498               |
| Surr: BFB                                      | 81.6   | 80-120   |      | %REC      | 1  | 9/27/2014 6:28:22 PM  | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 15     | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM  | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.039    |      | mg/Kg-dry | 1  | 10/2/2014 1:08:16 PM  | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 5.7      |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Arsenic                                        | ND     | 5.7      |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Barium                                         | 220    | 0.23     |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Beryllium                                      | 0.80   | 0.34     |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Cadmium                                        | ND     | 0.23     |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Chromium                                       | 9.6    | 0.69     |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Cobalt                                         | 7.2    | 0.69     |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Lead                                           | 7.2    | 0.57     |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Nickel                                         | 11     | 1.1      |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Selenium                                       | ND     | 5.7      |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Silver                                         | ND     | 0.57     |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Vanadium                                       | 32     | 5.7      |      | mg/Kg-dry | 2  | 10/1/2014 3:06:09 PM  | 15559                |
| Zinc                                           | 46     | 5.7      |      | mg/Kg-dry | 2  | 10/2/2014 1:01:41 PM  | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |
| Benzoic acid                                   | ND     | 0.59     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (12-14')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 10:50:00 AM

**Lab ID:** 1409B80-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.59 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.59 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 4-Chloroaniline                        | ND     | 0.59 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.59 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.47 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.47 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.35 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.59 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.59 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.59 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.59 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| Isophorone                             | ND     | 0.59 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 1-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |
| 2-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B80

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-18 (12-14')

Project: GROUP 9

Collection Date: 9/19/2014 10:50:00 AM

Lab ID: 1409B80-003

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|-----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                       | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 0.59      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| 3+4-Methylphenol                       | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| N-Nitrosodi-n-propylamine              | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| N-Nitrosodiphenylamine                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Naphthalene                            | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| 2-Nitroaniline                         | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| 3-Nitroaniline                         | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| 4-Nitroaniline                         | ND      | 0.47      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Nitrobenzene                           | ND      | 0.59      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| 2-Nitrophenol                          | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| 4-Nitrophenol                          | ND      | 0.29      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Pentachlorophenol                      | ND      | 0.47      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Phenanthrene                           | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Phenol                                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Pyrene                                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Pyridine                               | ND      | 0.59      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| 2,4,5-Trichlorophenol                  | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| 2,4,6-Trichlorophenol                  | ND      | 0.23      |      | mg/Kg-dry | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Surr: 2-Fluorophenol                   | 60.2    | 21-111    |      | %REC      | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Surr: Phenol-d5                        | 65.6    | 23.1-117  |      | %REC      | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Surr: 2,4,6-Tribromophenol             | 49.7    | 22.7-88.9 |      | %REC      | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Surr: Nitrobenzene-d5                  | 63.4    | 24.5-126  |      | %REC      | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Surr: 2-Fluorobiphenyl                 | 62.9    | 21.2-129  |      | %REC      | 1  | 9/25/2014 11:47:01 PM | 15483         |
| Surr: 4-Terphenyl-d14                  | 62.1    | 39.4-107  |      | %REC      | 1  | 9/25/2014 11:47:01 PM | 15483         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                       | Analyst: cadg |
| Benzene                                | 0.0137  | 0.00190   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| Toluene                                | 0.00354 | 0.00190   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| Ethylbenzene                           | 0.00607 | 0.00190   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| Xylenes, Total                         | 0.00921 | 0.00190   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| Methyl tert-butyl ether (MTBE)         | 0.00470 | 0.00190   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| 1,2,4-Trimethylbenzene                 | 0.00844 | 0.00190   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00190   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00190   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00190   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| Naphthalene                            | 0.00269 | 0.00190   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| 1-Methylnaphthalene                    | ND      | 0.00380   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| 2-Methylnaphthalene                    | ND      | 0.00380   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |
| Acetone                                | 0.0670  | 0.00950   |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM  | 15499         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B80

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-18 (12-14')

Project: GROUP 9

Collection Date: 9/19/2014 10:50:00 AM

Lab ID: 1409B80-003

Matrix: SOIL

Received Date: 9/24/2014 8:30:00 AM

| Analyses                               | Result  | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Bromodichloromethane                   | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Bromoform                              | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Bromomethane                           | ND      | 0.00285 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 2-Butanone                             | 0.0164  | 0.00950 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Carbon tetrachloride                   | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Chlorobenzene                          | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Chloroethane                           | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Chloroform                             | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Chloromethane                          | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 2-Chlorotoluene                        | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Carbon disulfide                       | ND      | 0.00950 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 4-Chlorotoluene                        | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| cis-1,2-DCE                            | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| cis-1,3-Dichloropropene                | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 1,2-Dibromo-3-chloropropane            | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Dibromochloromethane                   | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Dibromomethane                         | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 1,2-Dichlorobenzene                    | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 1,3-Dichlorobenzene                    | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 1,4-Dichlorobenzene                    | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Dichlorodifluoromethane                | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 1,1-Dichloroethane                     | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 1,1-Dichloroethene                     | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 1,2-Dichloropropane                    | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 1,3-Dichloropropane                    | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 2,2-Dichloropropane                    | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 1,1-Dichloropropene                    | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Hexachlorobutadiene                    | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Isopropylbenzene                       | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 4-Isopropyltoluene                     | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Methylene chloride                     | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| n-Butylbenzene                         | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 2-Hexanone                             | ND      | 0.00950 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| n-Propylbenzene                        | 0.00304 | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| sec-Butylbenzene                       | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| Styrene                                | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| 4-Methyl-2-pentanone                   | ND      | 0.00950 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |
| tert-Butylbenzene                      | ND      | 0.00190 |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (12-14')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 10:50:00 AM

**Lab ID:** 1409B80-003

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| Tetrachloroethene (PCE)                | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| trans-1,2-DCE                          | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| trans-1,3-Dichloropropene              | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| 1,1,1-Trichloroethane                  | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| 1,1,2-Trichloroethane                  | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| Trichloroethene (TCE)                  | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| Trichlorofluoromethane                 | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| 1,2,3-Trichloropropane                 | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| Vinyl chloride                         | ND     | 0.00190  |      | mg/Kg-dry | 1  | 9/25/2014 6:46:08 PM | 15499                |
| Surr: 1,2-Dichloroethane-d4            | 103    | 70-130   |      | %REC      | 1  | 9/25/2014 6:46:08 PM | 15499                |
| Surr: 4-Bromofluorobenzene             | 80.5   | 65.3-135 |      | %REC      | 1  | 9/25/2014 6:46:08 PM | 15499                |
| Surr: Dibromofluoromethane             | 98.4   | 70-130   |      | %REC      | 1  | 9/25/2014 6:46:08 PM | 15499                |
| Surr: Toluene-d8                       | 101    | 70-130   |      | %REC      | 1  | 9/25/2014 6:46:08 PM | 15499                |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 16 of 43 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 11:00:00 AM

**Lab ID:** 1409B80-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                      | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 13     | 10       |      | mg/Kg-dry | 1  | 9/29/2014 6:34:37 PM | 15526                |
| Motor Oil Range Organics (MRO)                 | ND     | 52       |      | mg/Kg-dry | 1  | 9/29/2014 6:34:37 PM | 15526                |
| Surr: DNOP                                     | 102    | 57.9-140 |      | %REC      | 1  | 9/29/2014 6:34:37 PM | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                      | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.9      |      | mg/Kg-dry | 1  | 9/27/2014 6:58:22 PM | R21498               |
| Surr: BFB                                      | 86.1   | 80-120   |      | %REC      | 1  | 9/27/2014 6:58:22 PM | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| Percent Moisture                               | 4.0    | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                      | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 10/2/2014 1:10:06 PM | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                      | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:06:52 PM | 15559                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 2:01:12 PM | 15559                |
| Barium                                         | 57     | 0.10     |      | mg/Kg-dry | 1  | 10/2/2014 1:06:52 PM | 15559                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/1/2014 2:01:12 PM | 15559                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 2:01:12 PM | 15559                |
| Chromium                                       | 1.1    | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 2:01:12 PM | 15559                |
| Cobalt                                         | 1.4    | 0.31     |      | mg/Kg-dry | 1  | 10/2/2014 1:06:52 PM | 15559                |
| Lead                                           | 2.2    | 0.25     |      | mg/Kg-dry | 1  | 10/2/2014 1:06:52 PM | 15559                |
| Nickel                                         | 1.4    | 0.51     |      | mg/Kg-dry | 1  | 10/1/2014 2:01:12 PM | 15559                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:06:52 PM | 15559                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 2:01:12 PM | 15559                |
| Vanadium                                       | 8.3    | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 2:01:12 PM | 15559                |
| Zinc                                           | 7.4    | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:06:52 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                      | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B80

Date Reported: 10/22/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 11:00:00 AM

**Lab ID:** 1409B80-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 1-Methylnaphthalene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2-Methylnaphthalene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B80

Date Reported: 10/22/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 11:00:00 AM

**Lab ID:** 1409B80-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Naphthalene                            | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Phenanthrene                           | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Surr: 2-Fluorophenol                   | 59.7   | 21-111    |      | %REC      | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Surr: Phenol-d5                        | 64.8   | 23.1-117  |      | %REC      | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Surr: 2,4,6-Tribromophenol             | 58.5   | 22.7-88.9 |      | %REC      | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Surr: Nitrobenzene-d5                  | 67.6   | 24.5-126  |      | %REC      | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Surr: 2-Fluorobiphenyl                 | 62.1   | 21.2-129  |      | %REC      | 1  | 9/26/2014 7:26:04 PM | 15506        |
| Surr: 4-Terphenyl-d14                  | 65.3   | 39.4-107  |      | %REC      | 1  | 9/26/2014 7:26:04 PM | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.039     |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| Toluene                                | ND     | 0.039     |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| Ethylbenzene                           | ND     | 0.039     |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.039     |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.039     |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.039     |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.039     |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.039     |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| Naphthalene                            | ND     | 0.078     |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| 1-Methylnaphthalene                    | ND     | 0.16      |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| 2-Methylnaphthalene                    | 0.17   | 0.16      |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| Acetone                                | ND     | 0.58      |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |
| Bromobenzene                           | ND     | 0.039     |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 11:00:00 AM

**Lab ID:** 1409B80-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|-------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: <b>RAA</b> |
| Bromodichloromethane               | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Bromoform                          | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Bromomethane                       | ND     | 0.12  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 2-Butanone                         | ND     | 0.39  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Carbon disulfide                   | ND     | 0.39  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Carbon tetrachloride               | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Chlorobenzene                      | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Chloroethane                       | ND     | 0.078 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Chloroform                         | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Chloromethane                      | ND     | 0.12  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 2-Chlorotoluene                    | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 4-Chlorotoluene                    | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| cis-1,2-DCE                        | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| cis-1,3-Dichloropropene            | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.078 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Dibromochloromethane               | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Dibromomethane                     | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,2-Dichlorobenzene                | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,3-Dichlorobenzene                | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,4-Dichlorobenzene                | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Dichlorodifluoromethane            | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,1-Dichloroethane                 | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,1-Dichloroethene                 | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,2-Dichloropropane                | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,3-Dichloropropane                | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 2,2-Dichloropropane                | ND     | 0.078 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,1-Dichloropropene                | ND     | 0.078 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Hexachlorobutadiene                | ND     | 0.078 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 2-Hexanone                         | ND     | 0.39  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Isopropylbenzene                   | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 4-Isopropyltoluene                 | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 4-Methyl-2-pentanone               | ND     | 0.39  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Methylene chloride                 | ND     | 0.12  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| n-Butylbenzene                     | ND     | 0.12  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| n-Propylbenzene                    | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| sec-Butylbenzene                   | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Styrene                            | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| tert-Butylbenzene                  | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.039 |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 11:00:00 AM

**Lab ID:** 1409B80-004

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.039  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Tetrachloroethene (PCE)            | ND     | 0.039  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| trans-1,2-DCE                      | ND     | 0.039  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| trans-1,3-Dichloropropene          | ND     | 0.039  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,2,3-Trichlorobenzene             | ND     | 0.078  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,2,4-Trichlorobenzene             | ND     | 0.039  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,1,1-Trichloroethane              | ND     | 0.039  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,1,2-Trichloroethane              | ND     | 0.039  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Trichloroethene (TCE)              | ND     | 0.039  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Trichlorofluoromethane             | ND     | 0.039  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| 1,2,3-Trichloropropane             | ND     | 0.078  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Vinyl chloride                     | ND     | 0.039  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Xylenes, Total                     | ND     | 0.078  |      | mg/Kg-dry | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Surr: Dibromofluoromethane         | 76.3   | 70-130 |      | %REC      | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Surr: 1,2-Dichloroethane-d4        | 79.1   | 70-130 |      | %REC      | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Surr: Toluene-d8                   | 88.0   | 70-130 |      | %REC      | 1  | 9/30/2014 4:07:09 PM | 15490               |
| Surr: 4-Bromofluorobenzene         | 82.9   | 70-130 |      | %REC      | 1  | 9/30/2014 4:07:09 PM | 15490               |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 21 of 43 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 11:10:00 AM

**Lab ID:** 1409B80-005

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                      | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 130    | 10       |      | mg/Kg-dry | 1  | 9/29/2014 6:56:07 PM | 15526                |
| Motor Oil Range Organics (MRO)                 | ND     | 51       |      | mg/Kg-dry | 1  | 9/29/2014 6:56:07 PM | 15526                |
| Surr: DNOP                                     | 109    | 57.9-140 |      | %REC      | 1  | 9/29/2014 6:56:07 PM | 15526                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                      | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 11     | 3.3      |      | mg/Kg-dry | 1  | 9/27/2014 7:28:20 PM | R21498               |
| Surr: BFB                                      | 167    | 80-120   | S    | %REC      | 1  | 9/27/2014 7:28:20 PM | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| Percent Moisture                               | 3.4    | 1.0      |      | wt%       | 1  | 9/24/2014 3:09:00 PM | R21448               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                      | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.034    |      | mg/Kg-dry | 1  | 10/2/2014 1:11:59 PM | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                      | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Barium                                         | 50     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Chromium                                       | 1.2    | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Cobalt                                         | 1.3    | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Lead                                           | 1.8    | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Nickel                                         | 1.2    | 0.51     |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Vanadium                                       | 6.4    | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 2:10:34 PM | 15559                |
| Zinc                                           | 6.6    | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:12:15 PM | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                      | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |
| Benzoic acid                                   | ND     | 0.51     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 11:10:00 AM

**Lab ID:** 1409B80-005

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.51 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 0.51 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 4-Chloroaniline                        | ND     | 0.51 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Di-n-butyl phthalate                   | ND     | 0.51 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Di-n-octyl phthalate                   | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.51 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 0.51 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 0.51 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 0.51 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| Isophorone                             | ND     | 0.51 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 1-Methylnaphthalene                    | 0.65   | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |
| 2-Methylnaphthalene                    | 0.99   | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 8:50:00 PM | 15506        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409B80

Date Reported: 10/22/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 11:10:00 AM

**Lab ID:** 1409B80-005

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                               | Result | RL        | Qual | Units        | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|-----------|------|--------------|----|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC |    |                      |       |
| 2-Methylphenol                         | ND     | 0.51      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Naphthalene                            | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| 4-Nitroaniline                         | ND     | 0.41      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Nitrobenzene                           | ND     | 0.51      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Pentachlorophenol                      | ND     | 0.41      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Phenanthrene                           | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Pyridine                               | ND     | 0.51      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Surr: 2-Fluorophenol                   | 70.2   | 21-111    |      | %REC         | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Surr: Phenol-d5                        | 76.1   | 23.1-117  |      | %REC         | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Surr: 2,4,6-Tribromophenol             | 73.8   | 22.7-88.9 |      | %REC         | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Surr: Nitrobenzene-d5                  | 80.4   | 24.5-126  |      | %REC         | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Surr: 2-Fluorobiphenyl                 | 76.6   | 21.2-129  |      | %REC         | 1  | 9/26/2014 8:50:00 PM | 15506 |
| Surr: 4-Terphenyl-d14                  | 74.2   | 39.4-107  |      | %REC         | 1  | 9/26/2014 8:50:00 PM | 15506 |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      | Analyst: RAA |    |                      |       |
| Benzene                                | ND     | 0.033     |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| Toluene                                | ND     | 0.033     |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| Ethylbenzene                           | ND     | 0.033     |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.033     |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| 1,2,4-Trimethylbenzene                 | ND     | 0.033     |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| 1,3,5-Trimethylbenzene                 | ND     | 0.033     |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.033     |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.033     |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| Naphthalene                            | 0.26   | 0.066     |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| 1-Methylnaphthalene                    | 1.0    | 0.13      |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| 2-Methylnaphthalene                    | 1.8    | 0.13      |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| Acetone                                | ND     | 0.50      |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |
| Bromobenzene                           | ND     | 0.033     |      | mg/Kg-dry    | 1  | 9/30/2014 4:35:14 PM | 15490 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 11:10:00 AM

**Lab ID:** 1409B80-005

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|-------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: <b>RAA</b> |
| Bromodichloromethane               | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Bromoform                          | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Bromomethane                       | ND     | 0.099 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 2-Butanone                         | ND     | 0.33  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Carbon disulfide                   | ND     | 0.33  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Carbon tetrachloride               | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Chlorobenzene                      | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Chloroethane                       | ND     | 0.066 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Chloroform                         | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Chloromethane                      | ND     | 0.099 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 2-Chlorotoluene                    | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 4-Chlorotoluene                    | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| cis-1,2-DCE                        | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| cis-1,3-Dichloropropene            | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.066 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Dibromochloromethane               | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Dibromomethane                     | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,2-Dichlorobenzene                | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,3-Dichlorobenzene                | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,4-Dichlorobenzene                | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Dichlorodifluoromethane            | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,1-Dichloroethane                 | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,1-Dichloroethene                 | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,2-Dichloropropane                | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,3-Dichloropropane                | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 2,2-Dichloropropane                | ND     | 0.066 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,1-Dichloropropene                | ND     | 0.066 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Hexachlorobutadiene                | ND     | 0.066 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 2-Hexanone                         | ND     | 0.33  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Isopropylbenzene                   | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 4-Isopropyltoluene                 | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 4-Methyl-2-pentanone               | ND     | 0.33  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Methylene chloride                 | ND     | 0.099 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| n-Butylbenzene                     | ND     | 0.099 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| n-Propylbenzene                    | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| sec-Butylbenzene                   | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Styrene                            | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| tert-Butylbenzene                  | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.033 |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409B80**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-18 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/19/2014 11:10:00 AM

**Lab ID:** 1409B80-005

**Matrix:** SOIL

**Received Date:** 9/24/2014 8:30:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.033  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Tetrachloroethene (PCE)            | ND     | 0.033  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| trans-1,2-DCE                      | ND     | 0.033  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| trans-1,3-Dichloropropene          | ND     | 0.033  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,2,3-Trichlorobenzene             | ND     | 0.066  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,2,4-Trichlorobenzene             | ND     | 0.033  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,1,1-Trichloroethane              | ND     | 0.033  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,1,2-Trichloroethane              | ND     | 0.033  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Trichloroethene (TCE)              | ND     | 0.033  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Trichlorofluoromethane             | ND     | 0.033  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| 1,2,3-Trichloropropane             | ND     | 0.066  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Vinyl chloride                     | ND     | 0.033  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Xylenes, Total                     | ND     | 0.066  |      | mg/Kg-dry | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Surr: Dibromofluoromethane         | 70.5   | 70-130 |      | %REC      | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Surr: 1,2-Dichloroethane-d4        | 79.7   | 70-130 |      | %REC      | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Surr: Toluene-d8                   | 86.8   | 70-130 |      | %REC      | 1  | 9/30/2014 4:35:14 PM | 15490               |
| Surr: 4-Bromofluorobenzene         | 82.1   | 70-130 |      | %REC      | 1  | 9/30/2014 4:35:14 PM | 15490               |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 26 of 43 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |



# Anatek Labs, Inc.

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

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

**Batch #:** 140925062  
**Project Name:** 1409B80

## Analytical Results Report

|                  |                                   |                 |           |                    |           |           |           |
|------------------|-----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140925062-001                     | Sampling Date   | 9/19/2014 | Date/Time Received | 9/25/2014 | 12:50 PM  |           |
| Client Sample ID | 1409B80-001C / SWMU 13-18 (0-0.5) |                 |           | Sampling Time      | 10:30 AM  |           |           |
| Matrix           | Soil                              | Sample Location |           |                    |           |           |           |
| Comments         |                                   |                 |           |                    |           |           |           |
| Parameter        | Result                            | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                                | mg/Kg           | 0.254     | 10/2/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 7.7                               | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

|                  |                                   |                 |           |                    |           |           |           |
|------------------|-----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140925062-002                     | Sampling Date   | 9/19/2014 | Date/Time Received | 9/25/2014 | 12:50 PM  |           |
| Client Sample ID | 1409B80-002C / SWMU 13-18 (0.5-2) |                 |           | Sampling Time      | 10:40 AM  |           |           |
| Matrix           | Soil                              | Sample Location |           |                    |           |           |           |
| Comments         |                                   |                 |           |                    |           |           |           |
| Parameter        | Result                            | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                                | mg/Kg           | 0.264     | 10/2/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 10.8                              | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

|                  |                                   |                 |           |                    |           |           |           |
|------------------|-----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140925062-003                     | Sampling Date   | 9/19/2014 | Date/Time Received | 9/25/2014 | 12:50 PM  |           |
| Client Sample ID | 1409B80-003C / SWMU 13-18 (12-14) |                 |           | Sampling Time      | 10:50 AM  |           |           |
| Matrix           | Soil                              | Sample Location |           |                    |           |           |           |
| Comments         |                                   |                 |           |                    |           |           |           |
| Parameter        | Result                            | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                                | mg/Kg           | 0.273     | 10/2/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 15                                | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

|                  |                                   |                 |           |                    |           |           |           |
|------------------|-----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140925062-004                     | Sampling Date   | 9/19/2014 | Date/Time Received | 9/25/2014 | 12:50 PM  |           |
| Client Sample ID | 1409B80-004C / SWMU 13-18 (22-24) |                 |           | Sampling Time      | 11:00 AM  |           |           |
| Matrix           | Soil                              | Sample Location |           |                    |           |           |           |
| Comments         |                                   |                 |           |                    |           |           |           |
| Parameter        | Result                            | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                                | mg/Kg           | 0.237     | 10/2/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 3.5                               | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

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



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

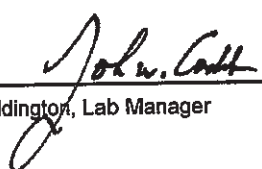
**Batch #:** 140925062  
**Project Name:** 1409B80

## Analytical Results Report

|                         |                                   |                        |           |                           |                    |
|-------------------------|-----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140925062-005                     | <b>Sampling Date</b>   | 9/19/2014 | <b>Date/Time Received</b> | 9/25/2014 12:50 PM |
| <b>Client Sample ID</b> | 1409B80-005C / SWMU 13-18 (24-26) |                        |           | <b>Sampling Time</b>      | 11:10 AM           |
| <b>Matrix</b>           | Soil                              | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                   |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.244 | 10/2/2014     | CRW     | EPA 335.4 |           |
| %moisture | 3.1    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

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

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The results reported relate only to the samples indicated.  
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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

Monday, October 13, 2014

Page 2 of 2

# Anatek Labs, Inc.

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

**Batch #:** 140925062  
**Project Name:** 1409B80

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|-----------|---------------|
| Cyanide   | 0.500      | mg/kg | 0.5       | 100.0 | 90-110  | 10/2/2014 | 10/2/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|-------|---------|-----------|---------------|
| 140925060-001 | Cyanide   | ND            | 13.1      | mg/kg | 13.1     | 100.0 | 90-110  | 10/2/2014 | 10/2/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 12.9       | mg/kg | 13.1      | 98.5 | 1.5  | 0-25    | 10/2/2014 | 10/2/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/2/2014 | 10/2/2014     |

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

### Comments:

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

Monday, October 13, 2014

Page 1 of 1



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

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

October 02, 2014

Hall Environmental Analysis Laborat  
4901 Hawkins NE  
Albuquerque, NM 87109

Date Received : September 25, 2014  
Description :  
Sample ID : 1409B80-001D SWMU 13-18 0-.5FT  
Collected By :  
Collection Date : 09/19/14 10:30

ESC Sample # : L723883-01

Site ID :

Project # :

| Parameter            | Result | Det. Limit | Units | Method      | Date     | Dil. |
|----------------------|--------|------------|-------|-------------|----------|------|
| Chromium, Hexavalent | BDL    | 2.0        | mg/kg | 3060A/7196A | 10/01/14 | 1    |
| ORP                  | 150    |            | mV    | 2580 B-2011 | 10/02/14 | 1    |
| pH                   | 6.8    |            | su    | 9045D       | 09/30/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 10/02/14 16:11 Printed: 10/02/14 16:47  
L723883-01 (PH) - 6.8@22.8c



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

October 02, 2014

Hall Environmental Analysis Laborat  
4901 Hawkins NE  
Albuquerque, NM 87109

Date Received : September 25, 2014  
Description :  
Sample ID : 1409B80-002D SWMU 13-18 0.5-2FT  
Collected By :  
Collection Date : 09/19/14 10:40

ESC Sample # : L723883-02

Site ID :

Project # :

| Parameter            | Result | Det. Limit | Units | Method      | Date     | Dil. |
|----------------------|--------|------------|-------|-------------|----------|------|
| Chromium, Hexavalent | BDL    | 2.0        | mg/kg | 3060A/7196A | 10/01/14 | 1    |
| ORP                  | 130    |            | mV    | 2580 B-2011 | 10/02/14 | 1    |
| pH                   | 7.0    |            | su    | 9045D       | 09/30/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 10/02/14 16:11 Printed: 10/02/14 16:47  
L723883-02 (PH) - 7.0@22.6c



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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

October 02, 2014

Hall Environmental Analysis Laborat  
4901 Hawkins NE  
Albuquerque, NM 87109

Date Received : September 25, 2014  
Description :  
Sample ID : 1409B80-003D SWMU 13-18 12-14FT  
Collected By :  
Collection Date : 09/19/14 10:50

ESC Sample # : L723883-03

Site ID :

Project # :

| Parameter            | Result | Det. Limit | Units | Method      | Date     | Dil. |
|----------------------|--------|------------|-------|-------------|----------|------|
| Chromium, Hexavalent | BDL    | 2.0        | mg/kg | 3060A/7196A | 10/01/14 | 1    |
| ORP                  | 110    |            | mV    | 2580 B-2011 | 10/02/14 | 1    |
| pH                   | 8.0    |            | su    | 9045D       | 09/30/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 10/02/14 16:11 Printed: 10/02/14 16:47  
L723883-03 (PH) - 8.0022.3c



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

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

October 02, 2014

Hall Environmental Analysis Laborat  
4901 Hawkins NE  
Albuquerque, NM 87109

Date Received : September 25, 2014  
Description :  
Sample ID : 1409B80-004D SWMU 13-18 22-24FT  
Collected By :  
Collection Date : 09/19/14 11:00

ESC Sample # : L723883-04

Site ID :

Project # :

| Parameter            | Result | Det. Limit | Units | Method      | Date     | Dil. |
|----------------------|--------|------------|-------|-------------|----------|------|
| Chromium, Hexavalent | BDL    | 2.0        | mg/kg | 3060A/7196A | 10/01/14 | 1    |
| ORP                  | 94.    |            | mV    | 2580 B-2011 | 10/02/14 | 1    |
| pH                   | 8.1    |            | su    | 9045D       | 09/30/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 10/02/14 16:11 Printed: 10/02/14 16:47

L723883-04 (PH) - 8.1022.5c



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859  
Tax I.D. 62-0814289  
Est. 1970

REPORT OF ANALYSIS

October 02, 2014

Hall Environmental Analysis Laborat  
4901 Hawkins NE  
Albuquerque, NM 87109

Date Received : September 25, 2014  
Description :  
Sample ID : 1409B80-005D SWMU 13-18 24-26FT  
Collected By :  
Collection Date : 09/19/14 11:10

ESC Sample # : L723883-05  
Site ID :  
Project # :

| Parameter            | Result | Det. Limit | Units | Method      | Date     | Dil. |
|----------------------|--------|------------|-------|-------------|----------|------|
| Chromium, Hexavalent | BDL    | 2.0        | mg/kg | 3060A/7196A | 10/01/14 | 1    |
| ORP                  | 97.    |            | mV    | 2580 B-2011 | 10/02/14 | 1    |
| pH                   | 8.2    |            | su    | 9045D       | 09/30/14 | 1    |

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)  
Note:  
The reported analytical results relate only to the sample submitted.  
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Reported: 10/02/14 16:11 Printed: 10/02/14 16:47  
L723883-05 (PH) - 8.2@21.8c





YOUR LAB OF CHOICE

Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report  
Level II

L723883

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

Tax I.D. 62-0814289

Est. 1970

October 02, 2014

| Analyte              | Result | Laboratory Blank<br>Units % Rec | Limit | Batch    | Date Analyzed  |
|----------------------|--------|---------------------------------|-------|----------|----------------|
| Chromium, Hexavalent | < 2    | mg/kg                           |       | WG745693 | 10/01/14 08:54 |

| Analyte              | Units | Result | Duplicate<br>Duplicate | RPD   | Limit | Ref Samp   | Batch    |
|----------------------|-------|--------|------------------------|-------|-------|------------|----------|
| pH                   | su    | 6.50   | 6.50                   | 0.308 | 1     | L723812-01 | WG745728 |
| pH                   | su    | 8.20   | 8.20                   | 0.487 | 1     | L723883-05 | WG745728 |
| Chromium, Hexavalent | mg/kg | 0.0    | 0.0                    | 0.0   | 20    | L724462-05 | WG745693 |
| Chromium, Hexavalent | mg/kg | 0.0    | 0.0                    | 0.0   | 20    | L723877-01 | WG745693 |
| ORP                  | mV    | 150.   | 150.                   | 1.98  | 20    | L723883-01 | WG746160 |
| ORP                  | mV    | 74.0   | 75.0                   | 1.34  | 20    | L724462-05 | WG746160 |

| Analyte              | Units | Laboratory Control Sample<br>Known Val Result | % Rec | Limit      | Batch    |
|----------------------|-------|-----------------------------------------------|-------|------------|----------|
| pH                   | su    | 6.33 6.30                                     | 99.5  | 98.3-101.7 | WG745728 |
| Chromium, Hexavalent | mg/kg | 187 174.                                      | 93.0  | 80-120     | WG745693 |
| ORP                  | mV    | 100 98.0                                      | 98.0  | 90-110     | WG746160 |

| Analyte              | Units | Laboratory Control Sample Duplicate<br>Result Ref %Rec | Limit      | RPD  | Limit | Batch    |
|----------------------|-------|--------------------------------------------------------|------------|------|-------|----------|
| pH                   | su    | 6.30 6.30 100.                                         | 98.3-101.7 | 0.0  | 20    | WG745728 |
| Chromium, Hexavalent | mg/kg | 174. 174. 93.0                                         | 80-120     | 0.0  | 20    | WG745693 |
| ORP                  | mV    | 96.0 98.0 96.0                                         | 90-110     | 2.06 | 20    | WG746160 |

| Analyte              | Units | MS Res | Matrix Spike<br>Ref Res TV | % Rec | Limit  | Ref Samp   | Batch    |
|----------------------|-------|--------|----------------------------|-------|--------|------------|----------|
| Chromium, Hexavalent | mg/kg | 18.5   | 0.0 20                     | 92.0  | 75-125 | L723883-04 | WG745693 |

| Analyte              | Units | MSD  | Matrix Spike Duplicate<br>Ref %Rec | Limit  | RPD | Limit | Ref Samp   | Batch    |
|----------------------|-------|------|------------------------------------|--------|-----|-------|------------|----------|
| Chromium, Hexavalent | mg/kg | 18.5 | 18.5 92.5                          | 75-125 | 0.0 | 20    | L723883-04 | WG745693 |

Batch number / Run number / Sample number cross reference

WG745728: R2993890: L723883-01 02 03 04 05

WG745693: R2994141: L723883-01 02 03 04 05

WG746160: R2994712: L723883-01 02 03 04 05

\* \* Calculations are performed prior to rounding of reported values.

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |     |                          |             |                                            |          |             |      |          |      |
|------------|-----------|-----|--------------------------|-------------|--------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB-15490  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID: | PBS       |     | Batch ID: 15490          |             | RunNo: 21449                               |          |             |      |          |      |
| Prep Date: | 9/24/2014 |     | Analysis Date: 9/25/2014 |             | SeqNo: 627618                              |          | Units: %REC |      |          |      |
| Analyte    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: BFB  | 880       |     | 1000                     |             | 87.7                                       | 80       | 120         |      |          |      |

|            |           |     |                          |             |                                            |          |             |      |          |      |
|------------|-----------|-----|--------------------------|-------------|--------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS-15490 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID: | LCSS      |     | Batch ID: 15490          |             | RunNo: 21449                               |          |             |      |          |      |
| Prep Date: | 9/24/2014 |     | Analysis Date: 9/25/2014 |             | SeqNo: 627619                              |          | Units: %REC |      |          |      |
| Analyte    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: BFB  | 980       |     | 1000                     |             | 98.0                                       | 80       | 120         |      |          |      |

|                               |        |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|--------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 5ML RB |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | PBS    |     | Batch ID: R21498         |             | RunNo: 21498                               |          |              |      |          |      |
| Prep Date:                    |        |     | Analysis Date: 9/27/2014 |             | SeqNo: 628838                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND     | 5.0 |                          |             |                                            |          |              |      |          |      |
| Surr: BFB                     | 870    |     | 1000                     |             | 86.8                                       | 80       | 120          |      |          |      |

|                               |               |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|---------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS          |     | Batch ID: R21498         |             | RunNo: 21498                               |          |              |      |          |      |
| Prep Date:                    |               |     | Analysis Date: 9/27/2014 |             | SeqNo: 628839                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result        | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24            | 5.0 | 25.00                    | 0           | 96.5                                       | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 960           |     | 1000                     |             | 96.3                                       | 80       | 120          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |       |                          |             |                                       |          |              |      |          |      |
|--------------------------------|-----------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15490  |       | SampType: MBLK           |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                     | PBS       |       | Batch ID: 15490          |             | RunNo: 21541                          |          |              |      |          |      |
| Prep Date:                     | 9/24/2014 |       | Analysis Date: 9/30/2014 |             | SeqNo: 630675                         |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL   | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Toluene                        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Naphthalene                    | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.20  |                          |             |                                       |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.20  |                          |             |                                       |          |              |      |          |      |
| Acetone                        | ND        | 0.75  |                          |             |                                       |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Bromoform                      | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Bromomethane                   | ND        | 0.15  |                          |             |                                       |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.50  |                          |             |                                       |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.50  |                          |             |                                       |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Chloroethane                   | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |
| Chloroform                     | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Chloromethane                  | ND        | 0.15  |                          |             |                                       |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 2,2-Dichloropropane            | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |       |                |                  |      |           |                                    |      |                     |      |
|-----------------------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID                   | <b>mb-15490</b>  |       | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:                  | <b>PBS</b>       |       | Batch ID:      | <b>15490</b>     |      | RunNo:    | <b>21541</b>                       |      |                     |      |
| Prep Date:                  | <b>9/24/2014</b> |       | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>630675</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| 1,1-Dichloropropene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 2-Hexanone                  | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Isopropylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Methylene chloride          | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Butylbenzene              | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Propylbenzene             | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| sec-Butylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Styrene                     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| tert-Butylbenzene           | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,2-DCE               | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Vinyl chloride              | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Xylenes, Total              | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.40             |       | 0.5000         |                  | 79.5 | 70        | 130                                |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.43             |       | 0.5000         |                  | 85.8 | 70        | 130                                |      |                     |      |
| Surr: Toluene-d8            | 0.44             |       | 0.5000         |                  | 87.7 | 70        | 130                                |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.40             |       | 0.5000         |                  | 80.8 | 70        | 130                                |      |                     |      |

|               |                  |       |                |                  |      |           |                                    |      |                     |      |
|---------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID     | <b>ics-15490</b> |       | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:    | <b>LCSS</b>      |       | Batch ID:      | <b>15490</b>     |      | RunNo:    | <b>21541</b>                       |      |                     |      |
| Prep Date:    | <b>9/24/2014</b> |       | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>630676</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| Benzene       | 0.93             | 0.050 | 1.000          | 0                | 92.8 | 70        | 130                                |      |                     |      |
| Toluene       | 0.87             | 0.050 | 1.000          | 0                | 86.6 | 70        | 130                                |      |                     |      |
| Chlorobenzene | 0.90             | 0.050 | 1.000          | 0                | 90.1 | 70        | 130                                |      |                     |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |       |                          |             |      |                                       |           |              |          |      |
|-----------------------------|-----------|-------|--------------------------|-------------|------|---------------------------------------|-----------|--------------|----------|------|
| Sample ID                   | Ics-15490 |       | SampType: LCS            |             |      | TestCode: EPA Method 8260B: Volatiles |           |              |          |      |
| Client ID:                  | LCSS      |       | Batch ID: 15490          |             |      | RunNo: 21541                          |           |              |          |      |
| Prep Date:                  | 9/24/2014 |       | Analysis Date: 9/30/2014 |             |      | SeqNo: 630676                         |           | Units: mg/Kg |          |      |
| Analyte                     | Result    | PQL   | SPK value                | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD         | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.92      | 0.050 | 1.000                    | 0           | 92.0 | 60.5                                  | 160       |              |          |      |
| Trichloroethene (TCE)       | 0.93      | 0.050 | 1.000                    | 0           | 93.1 | 58.8                                  | 139       |              |          |      |
| Surr: Dibromofluoromethane  | 0.41      |       | 0.5000                   |             | 82.3 | 70                                    | 130       |              |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.44      |       | 0.5000                   |             | 88.7 | 70                                    | 130       |              |          |      |
| Surr: Toluene-d8            | 0.43      |       | 0.5000                   |             | 85.3 | 70                                    | 130       |              |          |      |
| Surr: 4-Bromofluorobenzene  | 0.44      |       | 0.5000                   |             | 88.2 | 70                                    | 130       |              |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |         |                          |             |                                           |          |              |      |          |      |
|--------------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15499  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                     | PBS       |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                     | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627937                             |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Toluene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Xylenes, Total                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| Acetone                        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromoform                      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromomethane                   | ND        | 0.00300 |                          |             |                                           |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroform                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloromethane                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15499  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | PBS       |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627937                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 2,2-Dichloropropane         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloropropene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Hexachlorobutadiene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Isopropylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Isopropyltoluene          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methylene chloride          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| n-Butylbenzene              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Hexanone                  | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| n-Propylbenzene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| sec-Butylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Styrene                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Methyl-2-pentanone        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| tert-Butylbenzene           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Tetrachloroethene (PCE)     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,2-DCE               | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,3-Dichloropropene   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichloroethene (TCE)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichlorofluoromethane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichloropropane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Vinyl chloride              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0207    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0235    |         | 0.02000                  |             | 117                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0206    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0199    |         | 0.02000                  |             | 99.7                                      | 70       | 130          |      |          |      |

|               |           |         |                          |             |                                           |          |              |      |          |      |
|---------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID     | LCS-15499 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:    | LCSS      |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:    | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627939                             |          | Units: mg/Kg |      |          |      |
| Analyte       | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Toluene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Chlorobenzene | 0.0103    | 0.00200 | 0.01000                  | 0           | 103                                       | 70       | 130          |      |          |      |

### Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15499 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | LCSS      |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627939                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.00912   | 0.00200 | 0.01000                  | 0           | 91.2                                      | 70       | 130          |      |          |      |
| Trichloroethene (TCE)       | 0.00988   | 0.00200 | 0.01000                  | 0           | 98.8                                      | 61.6     | 131          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0213    |         | 0.02000                  |             | 107                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0228    |         | 0.02000                  |             | 114                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0201    |         | 0.02000                  |             | 101                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0201    |         | 0.02000                  |             | 100                                       | 70       | 130          |      |          |      |

### Qualifiers:

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P Sample pH greater than 2.  
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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15483  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15483          |             | RunNo: 21456                              |          |              |      |          |      |
| Prep Date:                  | 9/24/2014 |      | Analysis Date: 9/25/2014 |             | SeqNo: 627716                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |                                           |          |              |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15483  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 15483     | RunNo:      | 21456                           |          |           |      |          |      |
| Prep Date:                 | 9/24/2014 | Analysis Date: | 9/25/2014 | SeqNo:      | 627716                          | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 2.2       |                | 3.330     |             | 66.7                            | 21       | 111       |      |          |      |
| Surr: Phenol-d5            | 2.2       |                | 3.330     |             | 67.5                            | 23.1     | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.9       |                | 3.330     |             | 57.0                            | 22.7     | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5      | 1.2       |                | 1.670     |             | 72.7                            | 24.5     | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.1       |                | 1.670     |             | 67.2                            | 21.2     | 129       |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |                | 1.670     |             | 77.9                            | 39.4     | 107       |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |                                           |          |              |      |          |      |
|----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                  | Ics-15483 |      | SampType: LCS            |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15483          |             | RunNo: 21456                              |          |              |      |          |      |
| Prep Date:                 | 9/24/2014 |      | Analysis Date: 9/25/2014 |             | SeqNo: 627717                             |          | Units: mg/Kg |      |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene               | 1.2       | 0.20 | 1.670                    | 0           | 71.4                                      | 50.7     | 110          |      |          |      |
| 4-Chloro-3-methylphenol    | 2.7       | 0.50 | 3.330                    | 0           | 81.5                                      | 47.8     | 107          |      |          |      |
| 2-Chlorophenol             | 2.7       | 0.20 | 3.330                    | 0           | 80.1                                      | 45.7     | 108          |      |          |      |
| 1,4-Dichlorobenzene        | 1.1       | 0.20 | 1.670                    | 0           | 66.3                                      | 46.1     | 112          |      |          |      |
| 2,4-Dinitrotoluene         | 0.99      | 0.50 | 1.670                    | 0           | 59.0                                      | 44.9     | 114          |      |          |      |
| N-Nitrosodi-n-propylamine  | 1.1       | 0.20 | 1.670                    | 0           | 67.0                                      | 38.7     | 128          |      |          |      |
| 4-Nitrophenol              | 2.3       | 0.25 | 3.330                    | 0           | 69.5                                      | 40.2     | 103          |      |          |      |
| Pentachlorophenol          | 1.6       | 0.40 | 3.330                    | 0           | 48.2                                      | 32.9     | 94           |      |          |      |
| Phenol                     | 2.6       | 0.20 | 3.330                    | 0           | 78.0                                      | 44.1     | 109          |      |          |      |
| Pyrene                     | 1.3       | 0.20 | 1.670                    | 0           | 76.5                                      | 51.9     | 109          |      |          |      |
| 1,2,4-Trichlorobenzene     | 1.1       | 0.20 | 1.670                    | 0           | 64.9                                      | 49.5     | 115          |      |          |      |
| Surr: 2-Fluorophenol       | 2.4       |      | 3.330                    |             | 71.4                                      | 21       | 111          |      |          |      |
| Surr: Phenol-d5            | 2.5       |      | 3.330                    |             | 75.3                                      | 23.1     | 117          |      |          |      |
| Surr: 2,4,6-Tribromophenol | 2.3       |      | 3.330                    |             | 68.4                                      | 22.7     | 88.9         |      |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |      | 1.670                    |             | 77.7                                      | 24.5     | 126          |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 75.7                                      | 21.2     | 129          |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.5       |      | 1.670                    |             | 87.6                                      | 39.4     | 107          |      |          |      |

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15506  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15506          |             | RunNo: 21494                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |      | Analysis Date: 9/26/2014 |             | SeqNo: 628613                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |                |           |             |                                 |          |           |      |          |      |
|-----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                   | mb-15506  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                  | PBS       | Batch ID:      | 15506     | RunNo:      | 21494                           |          |           |      |          |      |
| Prep Date:                  | 9/25/2014 | Analysis Date: | 9/26/2014 | SeqNo:      | 628613                          | Units:   | mg/Kg     |      |          |      |
| Analyte                     | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 4-Bromophenyl phenyl ether  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Carbazole                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 4-Chloroaniline             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| 2-Chlorophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Chrysene                    | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Dibenzofuran                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Diethyl phthalate           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Dimethyl phthalate          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30           |           |             |                                 |          |           |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,4-Dinitrotoluene          | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene          | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                    | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane            | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                  | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol              | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol            | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |                  |      |                                 |             |                                                  |          |                     |      |          |      |
|----------------------------|------------------|------|---------------------------------|-------------|--------------------------------------------------|----------|---------------------|------|----------|------|
| Sample ID                  | <b>mb-15506</b>  |      | SampType: <b>MBLK</b>           |             | TestCode: <b>EPA Method 8270C: Semivolatiles</b> |          |                     |      |          |      |
| Client ID:                 | <b>PBS</b>       |      | Batch ID: <b>15506</b>          |             | RunNo: <b>21494</b>                              |          |                     |      |          |      |
| Prep Date:                 | <b>9/25/2014</b> |      | Analysis Date: <b>9/26/2014</b> |             | SeqNo: <b>628613</b>                             |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                    | Result           | PQL  | SPK value                       | SPK Ref Val | %REC                                             | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |
| Naphthalene                | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 2-Nitroaniline             | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 3-Nitroaniline             | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 4-Nitroaniline             | ND               | 0.40 |                                 |             |                                                  |          |                     |      |          |      |
| Nitrobenzene               | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| 2-Nitrophenol              | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 4-Nitrophenol              | ND               | 0.25 |                                 |             |                                                  |          |                     |      |          |      |
| Pentachlorophenol          | ND               | 0.40 |                                 |             |                                                  |          |                     |      |          |      |
| Phenanthrene               | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Phenol                     | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Pyrene                     | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Pyridine                   | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| 1,2,4-Trichlorobenzene     | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 2,4,5-Trichlorophenol      | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 2,4,6-Trichlorophenol      | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Surr: 2-Fluorophenol       | 2.4              |      | 3.330                           |             | 72.5                                             | 21       | 111                 |      |          |      |
| Surr: Phenol-d5            | 2.6              |      | 3.330                           |             | 76.9                                             | 23.1     | 117                 |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.5              |      | 3.330                           |             | 44.2                                             | 22.7     | 88.9                |      |          |      |
| Surr: Nitrobenzene-d5      | 1.4              |      | 1.670                           |             | 82.6                                             | 24.5     | 126                 |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3              |      | 1.670                           |             | 76.5                                             | 21.2     | 129                 |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.3              |      | 1.670                           |             | 76.9                                             | 39.4     | 107                 |      |          |      |

|                           |                  |      |                                 |             |                                                  |          |                     |      |          |      |
|---------------------------|------------------|------|---------------------------------|-------------|--------------------------------------------------|----------|---------------------|------|----------|------|
| Sample ID                 | <b>lcs-15506</b> |      | SampType: <b>LCS</b>            |             | TestCode: <b>EPA Method 8270C: Semivolatiles</b> |          |                     |      |          |      |
| Client ID:                | <b>LCSS</b>      |      | Batch ID: <b>15506</b>          |             | RunNo: <b>21494</b>                              |          |                     |      |          |      |
| Prep Date:                | <b>9/25/2014</b> |      | Analysis Date: <b>9/26/2014</b> |             | SeqNo: <b>628614</b>                             |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                   | Result           | PQL  | SPK value                       | SPK Ref Val | %REC                                             | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |
| Acenaphthene              | 1.2              | 0.20 | 1.670                           | 0           | 71.0                                             | 50.7     | 110                 |      |          |      |
| 4-Chloro-3-methylphenol   | 3.0              | 0.50 | 3.330                           | 0           | 88.7                                             | 47.8     | 107                 |      |          |      |
| 2-Chlorophenol            | 2.9              | 0.20 | 3.330                           | 0           | 85.6                                             | 45.7     | 108                 |      |          |      |
| 1,4-Dichlorobenzene       | 1.3              | 0.20 | 1.670                           | 0           | 78.5                                             | 46.1     | 112                 |      |          |      |
| 2,4-Dinitrotoluene        | 1.2              | 0.50 | 1.670                           | 0           | 69.9                                             | 44.9     | 114                 |      |          |      |
| N-Nitrosodi-n-propylamine | 1.3              | 0.20 | 1.670                           | 0           | 78.0                                             | 38.7     | 128                 |      |          |      |
| 4-Nitrophenol             | 2.7              | 0.25 | 3.330                           | 0           | 79.7                                             | 40.2     | 103                 |      |          |      |
| Pentachlorophenol         | 2.1              | 0.40 | 3.330                           | 0           | 64.6                                             | 32.9     | 94                  |      |          |      |
| Phenol                    | 3.0              | 0.20 | 3.330                           | 0           | 90.0                                             | 44.1     | 109                 |      |          |      |
| Pyrene                    | 1.3              | 0.20 | 1.670                           | 0           | 78.6                                             | 51.9     | 109                 |      |          |      |
| 1,2,4-Trichlorobenzene    | 1.3              | 0.20 | 1.670                           | 0           | 80.4                                             | 49.5     | 115                 |      |          |      |
| Surr: 2-Fluorophenol      | 2.5              |      | 3.330                           |             | 75.3                                             | 21       | 111                 |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |     |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|-----|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | Ics-15506 |     | SampType: LCS            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | LCSS      |     | Batch ID: 15506          |             |      | RunNo: 21494                              |           |              |          |      |
| Prep Date:                 | 9/25/2014 |     | Analysis Date: 9/26/2014 |             |      | SeqNo: 628614                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Surr: Phenol-d5            | 2.8       |     | 3.330                    |             | 85.0 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.5       |     | 3.330                    |             | 76.5 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |     | 1.670                    |             | 78.5 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |     | 1.670                    |             | 75.2 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |     | 1.670                    |             | 76.8 | 39.4                                      | 107       |              |          |      |

|                            |                    |      |                          |             |      |                                           |           |                  |          |      |
|----------------------------|--------------------|------|--------------------------|-------------|------|-------------------------------------------|-----------|------------------|----------|------|
| Sample ID                  | 1409B80-004Bms     |      | SampType: MS             |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |                  |          |      |
| Client ID:                 | SWMU 13-18 (22-24' |      | Batch ID: 15506          |             |      | RunNo: 21494                              |           |                  |          |      |
| Prep Date:                 | 9/25/2014          |      | Analysis Date: 9/26/2014 |             |      | SeqNo: 628632                             |           | Units: mg/Kg-dry |          |      |
| Analyte                    | Result             | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD             | RPDLimit | Qual |
| Acenaphthene               | 1.1                | 0.21 | 1.743                    | 0           | 62.1 | 53.8                                      | 92.8      |                  |          |      |
| 4-Chloro-3-methylphenol    | 2.5                | 0.52 | 3.476                    | 0           | 72.6 | 34.9                                      | 104       |                  |          |      |
| 2-Chlorophenol             | 2.2                | 0.21 | 3.476                    | 0           | 64.4 | 18.2                                      | 105       |                  |          |      |
| 1,4-Dichlorobenzene        | 1.0                | 0.21 | 1.743                    | 0           | 58.5 | 18.1                                      | 112       |                  |          |      |
| 2,4-Dinitrotoluene         | 1.1                | 0.52 | 1.743                    | 0           | 63.3 | 22                                        | 144       |                  |          |      |
| N-Nitrosodi-n-propylamine  | 1.1                | 0.21 | 1.743                    | 0           | 62.2 | 58.6                                      | 101       |                  |          |      |
| 4-Nitrophenol              | 2.5                | 0.26 | 3.476                    | 0           | 71.6 | 13.7                                      | 127       |                  |          |      |
| Pentachlorophenol          | 1.9                | 0.42 | 3.476                    | 0           | 54.2 | 16.5                                      | 107       |                  |          |      |
| Phenol                     | 2.2                | 0.21 | 3.476                    | 0           | 64.4 | 12.5                                      | 114       |                  |          |      |
| Pyrene                     | 1.2                | 0.21 | 1.743                    | 0           | 69.9 | 14.2                                      | 116       |                  |          |      |
| 1,2,4-Trichlorobenzene     | 1.2                | 0.21 | 1.743                    | 0           | 66.1 | 16                                        | 125       |                  |          |      |
| Surr: 2-Fluorophenol       | 1.8                |      | 3.476                    |             | 52.7 | 21                                        | 111       |                  |          |      |
| Surr: Phenol-d5            | 2.2                |      | 3.476                    |             | 62.2 | 23.1                                      | 117       |                  |          |      |
| Surr: 2,4,6-Tribromophenol | 2.6                |      | 3.476                    |             | 75.1 | 22.7                                      | 88.9      |                  |          |      |
| Surr: Nitrobenzene-d5      | 1.0                |      | 1.743                    |             | 59.4 | 24.5                                      | 126       |                  |          |      |
| Surr: 2-Fluorobiphenyl     | 1.1                |      | 1.743                    |             | 63.4 | 21.2                                      | 129       |                  |          |      |
| Surr: 4-Terphenyl-d14      | 1.2                |      | 1.743                    |             | 71.0 | 39.4                                      | 107       |                  |          |      |

|                           |                    |      |                          |             |      |                                           |           |                  |          |      |
|---------------------------|--------------------|------|--------------------------|-------------|------|-------------------------------------------|-----------|------------------|----------|------|
| Sample ID                 | 1409B80-004Bmsd    |      | SampType: MSD            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |                  |          |      |
| Client ID:                | SWMU 13-18 (22-24' |      | Batch ID: 15506          |             |      | RunNo: 21494                              |           |                  |          |      |
| Prep Date:                | 9/25/2014          |      | Analysis Date: 9/26/2014 |             |      | SeqNo: 628633                             |           | Units: mg/Kg-dry |          |      |
| Analyte                   | Result             | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD             | RPDLimit | Qual |
| Acenaphthene              | 1.3                | 0.21 | 1.737                    | 0           | 77.2 | 53.8                                      | 92.8      | 21.4             | 22       |      |
| 4-Chloro-3-methylphenol   | 3.0                | 0.52 | 3.463                    | 0           | 85.8 | 34.9                                      | 104       | 16.4             | 27.3     |      |
| 2-Chlorophenol            | 2.6                | 0.21 | 3.463                    | 0           | 75.1 | 18.2                                      | 105       | 15.0             | 26.3     |      |
| 1,4-Dichlorobenzene       | 1.2                | 0.21 | 1.737                    | 0           | 66.9 | 18.1                                      | 112       | 13.1             | 27.4     |      |
| 2,4-Dinitrotoluene        | 1.3                | 0.52 | 1.737                    | 0           | 72.3 | 22                                        | 144       | 12.9             | 27.4     |      |
| N-Nitrosodi-n-propylamine | 1.3                | 0.21 | 1.737                    | 0           | 73.8 | 58.6                                      | 101       | 16.8             | 22.6     |      |

### Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |                    |                |           |             |                                 |          |           |      |          |      |
|----------------------------|--------------------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | 1409B80-004Bmsd    | SampType:      | MSD       | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | SWMU 13-18 (22-24' | Batch ID:      | 15506     | RunNo:      | 21494                           |          |           |      |          |      |
| Prep Date:                 | 9/25/2014          | Analysis Date: | 9/26/2014 | SeqNo:      | 628633                          | Units:   | mg/Kg-dry |      |          |      |
| Analyte                    | Result             | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 4-Nitrophenol              | 2.9                | 0.26           | 3.463     | 0           | 84.9                            | 13.7     | 127       | 16.7 | 20       |      |
| Pentachlorophenol          | 2.3                | 0.42           | 3.463     | 0           | 65.9                            | 16.5     | 107       | 19.2 | 27.1     |      |
| Phenol                     | 2.7                | 0.21           | 3.463     | 0           | 76.9                            | 12.5     | 114       | 17.4 | 32.2     |      |
| Pyrene                     | 1.5                | 0.21           | 1.737     | 0           | 83.8                            | 14.2     | 116       | 17.7 | 29.5     |      |
| 1,2,4-Trichlorobenzene     | 1.3                | 0.21           | 1.737     | 0           | 76.1                            | 16       | 125       | 13.8 | 27.8     |      |
| Surr: 2-Fluorophenol       | 2.1                |                | 3.463     |             | 60.8                            | 21       | 111       | 0    | 0        |      |
| Surr: Phenol-d5            | 2.5                |                | 3.463     |             | 73.1                            | 23.1     | 117       | 0    | 0        |      |
| Surr: 2,4,6-Tribromophenol | 2.8                |                | 3.463     |             | 81.5                            | 22.7     | 88.9      | 0    | 0        |      |
| Surr: Nitrobenzene-d5      | 1.3                |                | 1.737     |             | 73.8                            | 24.5     | 126       | 0    | 0        |      |
| Surr: 2-Fluorobiphenyl     | 1.3                |                | 1.737     |             | 77.2                            | 21.2     | 129       | 0    | 0        |      |
| Surr: 4-Terphenyl-d14      | 1.4                |                | 1.737     |             | 79.7                            | 39.4     | 107       | 0    | 0        |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | MB-15593  |       | SampType: MBLK           |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | PBS       |       | Batch ID: 15593          |             | RunNo: 21606                       |          |              |      |          |      |
| Prep Date: | 9/29/2014 |       | Analysis Date: 10/2/2014 |             | SeqNo: 633786                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercurv    | ND        | 0.033 |                          |             |                                    |          |              |      |          |      |

|            |           |       |           |                |           |          |           |                          |          |        |       |
|------------|-----------|-------|-----------|----------------|-----------|----------|-----------|--------------------------|----------|--------|-------|
| Sample ID  | LCS-15593 |       |           | SampType:      | LCS       |          | TestCode: | EPA Method 7471: Mercury |          |        |       |
| Client ID: | LCSS      |       |           | Batch ID:      | 15593     |          | RunNo:    | 21606                    |          |        |       |
| Prep Date: | 9/29/2014 |       |           | Analysis Date: | 10/2/2014 |          | SeqNo:    | 633787                   |          | Units: | mg/Kg |
| Analyte    | Result    | PQL   | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD                     | RPDLimit | Qual   |       |
| Mercury    | 0.17      | 0.033 | 0.1667    | 0              | 104       | 80       | 120       |                          |          |        |       |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|            |                    |      |                          |             |                                         |          |                  |      |          |      |
|------------|--------------------|------|--------------------------|-------------|-----------------------------------------|----------|------------------|------|----------|------|
| Sample ID  | 1409B80-004BMS     |      | SampType: MS             |             | TestCode: EPA Method 6010B: Soil Metals |          |                  |      |          |      |
| Client ID: | SWMU 13-18 (22-24' |      | Batch ID: 15559          |             | RunNo: 21583                            |          |                  |      |          |      |
| Prep Date: | 9/27/2014          |      | Analysis Date: 10/1/2014 |             | SeqNo: 632435                           |          | Units: mg/Kg-dry |      |          |      |
| Analyte    | Result             | PQL  | SPK value                | SPK Ref Val | %REC                                    | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Arsenic    | 21                 | 2.6  | 25.64                    | 0.9052      | 77.3                                    | 75       | 125              |      |          |      |
| Beryllium  | 21                 | 0.15 | 25.64                    | 0.1310      | 80.6                                    | 75       | 125              |      |          |      |
| Cadmium    | 20                 | 0.10 | 25.64                    | 0           | 77.6                                    | 75       | 125              |      |          |      |
| Chromium   | 21                 | 0.31 | 25.64                    | 1.115       | 76.3                                    | 75       | 125              |      |          |      |
| Nickel     | 21                 | 0.51 | 25.64                    | 1.364       | 78.0                                    | 75       | 125              |      |          |      |
| Silver     | 3.9                | 0.26 | 5.128                    | 0           | 76.3                                    | 75       | 125              |      |          |      |
| Vanadium   | 30                 | 2.6  | 25.64                    | 8.316       | 83.0                                    | 75       | 125              |      |          |      |

|            |                    |      |                          |             |                                         |          |                  |      |          |      |
|------------|--------------------|------|--------------------------|-------------|-----------------------------------------|----------|------------------|------|----------|------|
| Sample ID  | 1409B80-004BMSD    |      | SampType: MSD            |             | TestCode: EPA Method 6010B: Soil Metals |          |                  |      |          |      |
| Client ID: | SWMU 13-18 (22-24' |      | Batch ID: 15559          |             | RunNo: 21583                            |          |                  |      |          |      |
| Prep Date: | 9/27/2014          |      | Analysis Date: 10/1/2014 |             | SeqNo: 632436                           |          | Units: mg/Kg-dry |      |          |      |
| Analyte    | Result             | PQL  | SPK value                | SPK Ref Val | %REC                                    | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Arsenic    | 22                 | 2.5  | 25.03                    | 0.9052      | 85.4                                    | 75       | 125              | 7.27 | 20       |      |
| Beryllium  | 23                 | 0.15 | 25.03                    | 0.1310      | 90.5                                    | 75       | 125              | 9.08 | 20       |      |
| Cadmium    | 22                 | 0.10 | 25.03                    | 0           | 87.3                                    | 75       | 125              | 9.46 | 20       |      |
| Chromium   | 22                 | 0.30 | 25.03                    | 1.115       | 84.9                                    | 75       | 125              | 7.82 | 20       |      |
| Nickel     | 22                 | 0.50 | 25.03                    | 1.364       | 83.6                                    | 75       | 125              | 4.28 | 20       |      |
| Silver     | 4.3                | 0.25 | 5.006                    | 0           | 85.7                                    | 75       | 125              | 9.28 | 20       |      |
| Vanadium   | 32                 | 2.5  | 25.03                    | 8.316       | 92.9                                    | 75       | 125              | 6.47 | 20       |      |

|            |                    |      |                          |             |                                         |          |                  |      |          |      |
|------------|--------------------|------|--------------------------|-------------|-----------------------------------------|----------|------------------|------|----------|------|
| Sample ID  | 1409B80-004BMS     |      | SampType: MS             |             | TestCode: EPA Method 6010B: Soil Metals |          |                  |      |          |      |
| Client ID: | SWMU 13-18 (22-24' |      | Batch ID: 15559          |             | RunNo: 21599                            |          |                  |      |          |      |
| Prep Date: | 9/27/2014          |      | Analysis Date: 10/2/2014 |             | SeqNo: 634025                           |          | Units: mg/Kg-dry |      |          |      |
| Analyte    | Result             | PQL  | SPK value                | SPK Ref Val | %REC                                    | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Antimony   | 14                 | 2.6  | 25.64                    | 0           | 54.5                                    | 75       | 125              |      |          | S    |
| Barium     | 75                 | 0.10 | 25.64                    | 56.88       | 72.3                                    | 75       | 125              |      |          | S    |
| Cobalt     | 21                 | 0.31 | 25.64                    | 1.449       | 77.4                                    | 75       | 125              |      |          |      |
| Lead       | 22                 | 0.26 | 25.64                    | 2.168       | 77.3                                    | 75       | 125              |      |          |      |
| Selenium   | 21                 | 2.6  | 25.64                    | 0           | 80.4                                    | 75       | 125              |      |          |      |
| Zinc       | 27                 | 2.6  | 25.64                    | 7.401       | 77.6                                    | 75       | 125              |      |          |      |

|            |                    |      |                |             |      |           |                               |      |                  |      |  |
|------------|--------------------|------|----------------|-------------|------|-----------|-------------------------------|------|------------------|------|--|
| Sample ID  | 1409B80-004BMSD    |      | SampType:      | MSD         |      | TestCode: | EPA Method 6010B: Soil Metals |      |                  |      |  |
| Client ID: | SWMU 13-18 (22-24' |      | Batch ID:      | 15559       |      | RunNo:    | 21599                         |      |                  |      |  |
| Prep Date: | 9/27/2014          |      | Analysis Date: | 10/2/2014   |      | SeqNo:    | 634026                        |      | Units: mg/Kg-dry |      |  |
| Analyte    | Result             | PQL  | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                     | %RPD | RPDLimit         | Qual |  |
| Antimony   | 14                 | 2.5  | 25.03          | 0           | 57.8 | 75        | 125                           | 3.56 | 20               | S    |  |
| Barium     | 67                 | 0.10 | 25.03          | 56.88       | 42.1 | 75        | 125                           | 11.2 | 20               | S    |  |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409B80

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |        |                    |           |                          |               |               |                                         |                  |          |      |
|------------|--------|--------------------|-----------|--------------------------|---------------|---------------|-----------------------------------------|------------------|----------|------|
| Sample ID  |        | 1409B80-004BMSD    |           |                          | SampType: MSD |               | TestCode: EPA Method 6010B: Soil Metals |                  |          |      |
| Client ID: |        | SWMU 13-18 (22-24' |           | Batch ID: 15559          |               | RunNo: 21599  |                                         |                  |          |      |
| Prep Date: |        | 9/27/2014          |           | Analysis Date: 10/2/2014 |               | SeqNo: 634026 |                                         | Units: mg/Kg-dry |          |      |
| Analyte    | Result | PQL                | SPK value | SPK Ref Val              | %REC          | LowLimit      | HighLimit                               | %RPD             | RPDLimit | Qual |
| Cobalt     | 23     | 0.30               | 25.03     | 1.449                    | 85.3          | 75            | 125                                     | 6.81             | 20       |      |
| Lead       | 23     | 0.25               | 25.03     | 2.168                    | 84.7          | 75            | 125                                     | 6.04             | 20       |      |
| Selenium   | 22     | 2.5                | 25.03     | 0                        | 86.9          | 75            | 125                                     | 5.34             | 20       |      |
| Zinc       | 29     | 2.5                | 25.03     | 7.401                    | 87.7          | 75            | 125                                     | 7.22             | 20       |      |

### Qualifiers:

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

# Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409B80

RcptNo: 1

Received by/date:

*CM 09/24/14*

Logged By: Anne Thorne

9/24/2014 8:30:00 AM

*Anne Thorne*

Completed By: Anne Thorne

9/24/2014

*Anne Thorne*

Reviewed By:

*CS*

*09/24/14*

## Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Courier

## Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of >0° C to 6.0°C

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☐

No ☐

No VOA Vials ☒

11. Were any sample containers received broken?

Yes ☐

No ☒

12. Does paperwork match bottle labels?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

Yes ☒

No ☐

(If no, notify customer for authorization.)

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified:

Date

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

## 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.1     | Good      | Yes         |         |           |           |



[www.hallenvironmental.com](http://www.hallenvironmental.com)

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

## Analysis Request

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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.



# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                    | Analytical Method              |
|----------------------------|--------------------------------|
| Antimony                   | SW-846 method 6010/6020        |
| Arsenic                    | SW-846 method 6010/6020        |
| Barium                     | SW-846 method 6010/6020        |
| Beryllium                  | SW-846 method 6010/6020        |
| Cadmium                    | SW-846 method 6010/6020        |
| Chromium                   | SW-846 method 6010/6020        |
| Chromium VI                | SW-846 Method 3060A            |
| Cobalt                     | SW-846 method 6010/6020        |
| Cyanide                    | SW-846 method 335.4/335.2 mod  |
| Lead                       | SW-846 method 6010/6020        |
| <del>Tetraethyl Lead</del> | <del>SW-846 method 62700</del> |
| Mercury                    | SW-846 method 7470/7471        |
| Nickel                     | SW-846 method 6010/6020        |
| Selenium                   | SW-846 method 6010/6020        |
| Silver                     | SW-846 method 6010/6020        |
| Vanadium                   | SW-846 method 6010/6020        |
| Zinc                       | SW-846 method 6010/6020        |



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

October 21, 2014

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409C40

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 10 sample(s) on 9/25/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



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

## Case Narrative

WO#: 1409C40  
Date: 10/21/2014

---

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

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Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:25:00 PM

**Lab ID:** 1409C40-001

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 71     | 10       |      | mg/Kg-dry | 1  | 9/26/2014 5:08:07 PM  | 15513                |
| Motor Oil Range Organics (MRO)                 | 120    | 51       |      | mg/Kg-dry | 1  | 9/26/2014 5:08:07 PM  | 15513                |
| Surr: DNOP                                     | 84.2   | 57.9-140 |      | %REC      | 1  | 9/26/2014 5:08:07 PM  | 15513                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 3.9    | 3.2      |      | mg/Kg-dry | 1  | 9/28/2014 7:25:33 PM  | R21502               |
| Surr: BFB                                      | 116    | 80-120   |      | %REC      | 1  | 9/28/2014 7:25:33 PM  | R21502               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 3.3    | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.050  | 0.034    |      | mg/Kg-dry | 1  | 10/7/2014 12:45:33 PM | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Barium                                         | 160    | 0.10     |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Beryllium                                      | 0.26   | 0.15     |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Chromium                                       | 5.6    | 0.30     |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Cobalt                                         | 3.8    | 0.30     |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Lead                                           | 4.6    | 0.25     |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Nickel                                         | 4.1    | 0.50     |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Vanadium                                       | 17     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| Zinc                                           | 38     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:17:17 PM  | 15639                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.41     |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |
| Acenaphthylene                                 | ND     | 0.41     |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |
| Aniline                                        | ND     | 0.41     |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |
| Anthracene                                     | ND     | 0.41     |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |
| Azobenzene                                     | ND     | 0.41     |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |
| Benz(a)anthracene                              | ND     | 0.41     |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |
| Benzo(a)pyrene                                 | ND     | 0.41     |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |
| Benzo(b)fluoranthene                           | ND     | 0.41     |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 0.41     |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |
| Benzo(k)fluoranthene                           | ND     | 0.41     |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |
| Benzoic acid                                   | ND     | 1.0      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |
| Benzyl alcohol                                 | ND     | 0.41     |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:25:00 PM

**Lab ID:** 1409C40-001

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.0  |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Butyl benzyl phthalate                 | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Carbazole                              | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 1.0  |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 4-Chloroaniline                        | ND     | 1.0  |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2-Chloronaphthalene                    | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2-Chlorophenol                         | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Chrysene                               | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Di-n-butyl phthalate                   | ND     | 1.0  |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Di-n-octyl phthalate                   | ND     | 0.82 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Dibenzofuran                           | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Diethyl phthalate                      | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Dimethyl phthalate                     | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 0.82 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 0.62 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.0  |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 1.0  |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 1.0  |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 1.0  |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Fluoranthene                           | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Fluorene                               | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Hexachlorobenzene                      | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Hexachlorobutadiene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Hexachloroethane                       | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Isophorone                             | ND     | 1.0  |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 1-Methylnaphthalene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2-Methylnaphthalene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |

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

|                    |                                                   |                                                      |              |
|--------------------|---------------------------------------------------|------------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    | Page 3 of 64 |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |              |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |              |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |              |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |              |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:25:00 PM

**Lab ID:** 1409C40-001

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 1.0       |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 3+4-Methylphenol                       | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Naphthalene                            | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2-Nitroaniline                         | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 3-Nitroaniline                         | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 4-Nitroaniline                         | ND     | 0.82      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Nitrobenzene                           | ND     | 1.0       |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2-Nitrophenol                          | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 4-Nitrophenol                          | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Pentachlorophenol                      | ND     | 0.82      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Phenanthrene                           | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Phenol                                 | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Pyrene                                 | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Pyridine                               | ND     | 1.0       |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Surr: 2-Fluorophenol                   | 73.1   | 21-111    |      | %REC      | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Surr: Phenol-d5                        | 78.4   | 23.1-117  |      | %REC      | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Surr: 2,4,6-Tribromophenol             | 38.3   | 22.7-88.9 |      | %REC      | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Surr: Nitrobenzene-d5                  | 82.8   | 24.5-126  |      | %REC      | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Surr: 2-Fluorobiphenyl                 | 80.7   | 21.2-129  |      | %REC      | 1  | 9/26/2014 11:37:06 PM | 15506        |
| Surr: 4-Terphenyl-d14                  | 77.9   | 39.4-107  |      | %REC      | 1  | 9/26/2014 11:37:06 PM | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                       | Analyst: RAA |
| Benzene                                | ND     | 0.032     |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| Toluene                                | ND     | 0.032     |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| Ethylbenzene                           | ND     | 0.032     |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.032     |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.032     |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.032     |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.032     |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.032     |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| Naphthalene                            | ND     | 0.065     |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| 1-Methylnaphthalene                    | ND     | 0.13      |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| 2-Methylnaphthalene                    | ND     | 0.13      |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| Acetone                                | ND     | 0.48      |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |
| Bromobenzene                           | ND     | 0.032     |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM  | 15512        |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 4 of 64 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:25:00 PM

**Lab ID:** 1409C40-001

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|-------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Bromoform                          | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Bromomethane                       | ND     | 0.097 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 2-Butanone                         | ND     | 0.32  |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Carbon disulfide                   | ND     | 0.32  |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Carbon tetrachloride               | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Chlorobenzene                      | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Chloroethane                       | ND     | 0.065 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Chloroform                         | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Chloromethane                      | ND     | 0.097 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 2-Chlorotoluene                    | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 4-Chlorotoluene                    | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| cis-1,2-DCE                        | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| cis-1,3-Dichloropropene            | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.065 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Dibromochloromethane               | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Dibromomethane                     | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 1,2-Dichlorobenzene                | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 1,3-Dichlorobenzene                | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 1,4-Dichlorobenzene                | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Dichlorodifluoromethane            | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 1,1-Dichloroethane                 | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 1,1-Dichloroethene                 | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 1,2-Dichloropropane                | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 1,3-Dichloropropane                | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 2,2-Dichloropropane                | ND     | 0.065 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 1,1-Dichloropropene                | ND     | 0.065 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Hexachlorobutadiene                | ND     | 0.065 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 2-Hexanone                         | ND     | 0.32  |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Isopropylbenzene                   | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 4-Isopropyltoluene                 | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 4-Methyl-2-pentanone               | ND     | 0.32  |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Methylene chloride                 | ND     | 0.097 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| n-Butylbenzene                     | ND     | 0.097 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| n-Propylbenzene                    | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| sec-Butylbenzene                   | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| Styrene                            | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| tert-Butylbenzene                  | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.032 |      | mg/Kg-dry | 1  | 9/30/2014 6:27:13 PM | 15512        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:25:00 PM

**Lab ID:** 1409C40-001

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |       |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.032  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| Tetrachloroethene (PCE)            | ND     | 0.032  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| trans-1,2-DCE                      | ND     | 0.032  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| trans-1,3-Dichloropropene          | ND     | 0.032  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| 1,2,3-Trichlorobenzene             | ND     | 0.065  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| 1,2,4-Trichlorobenzene             | ND     | 0.032  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| 1,1,1-Trichloroethane              | ND     | 0.032  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| 1,1,2-Trichloroethane              | ND     | 0.032  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| Trichloroethene (TCE)              | ND     | 0.032  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| Trichlorofluoromethane             | ND     | 0.032  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| 1,2,3-Trichloropropane             | ND     | 0.065  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| Vinyl chloride                     | ND     | 0.032  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| Xylenes, Total                     | ND     | 0.065  |      | mg/Kg-dry           | 1  | 9/30/2014 6:27:13 PM | 15512 |
| Surr: Dibromofluoromethane         | 79.4   | 70-130 |      | %REC                | 1  | 9/30/2014 6:27:13 PM | 15512 |
| Surr: 1,2-Dichloroethane-d4        | 82.0   | 70-130 |      | %REC                | 1  | 9/30/2014 6:27:13 PM | 15512 |
| Surr: Toluene-d8                   | 90.8   | 70-130 |      | %REC                | 1  | 9/30/2014 6:27:13 PM | 15512 |
| Surr: 4-Bromofluorobenzene         | 85.9   | 70-130 |      | %REC                | 1  | 9/30/2014 6:27:13 PM | 15512 |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 64 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:35:00 PM

**Lab ID:** 1409C40-002

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 2000   | 110      |      | mg/Kg-dry | 10 | 9/26/2014 6:12:40 PM  | 15513                |
| Motor Oil Range Organics (MRO)                 | 780    | 550      |      | mg/Kg-dry | 10 | 9/26/2014 6:12:40 PM  | 15513                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/26/2014 6:12:40 PM  | 15513                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 810    | 170      |      | mg/Kg-dry | 50 | 9/29/2014 12:01:48 PM | R21524               |
| Surr: BFB                                      | 137    | 80-120   | S    | %REC      | 50 | 9/29/2014 12:01:48 PM | R21524               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 8.0    | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 10/7/2014 12:51:00 PM | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Arsenic                                        | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Barium                                         | 120    | 0.11     |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Beryllium                                      | 0.29   | 0.16     |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Chromium                                       | 4.6    | 0.32     |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Cobalt                                         | 3.2    | 0.32     |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Lead                                           | 5.6    | 0.27     |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Nickel                                         | 4.5    | 0.54     |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Vanadium                                       | 16     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| Zinc                                           | 23     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:18:34 PM  | 15639                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |
| Acenaphthylene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |
| Aniline                                        | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |
| Anthracene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |
| Azobenzene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |
| Benz(a)anthracene                              | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |
| Benzo(a)pyrene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |
| Benzo(b)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |
| Benzo(k)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |
| Benzoic acid                                   | ND     | 5.5      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |
| Benzyl alcohol                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:35:00 PM

**Lab ID:** 1409C40-002

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Butyl benzyl phthalate                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Carbazole                              | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 4-Chloroaniline                        | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2-Chloronaphthalene                    | ND     | 2.7 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2-Chlorophenol                         | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Chrysene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Di-n-butyl phthalate                   | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Di-n-octyl phthalate                   | ND     | 4.4 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Dibenzofuran                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.7 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Diethyl phthalate                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Dimethyl phthalate                     | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 4.4 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 3.3 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Fluoranthene                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Fluorene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Hexachlorobenzene                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Hexachlorobutadiene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Hexachloroethane                       | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Isophorone                             | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 1-Methylnaphthalene                    | 11     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2-Methylnaphthalene                    | 11     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 8 of 64 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:35:00 PM

**Lab ID:** 1409C40-002

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 5.5       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 3+4-Methylphenol                       | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Naphthalene                            | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2-Nitroaniline                         | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 3-Nitroaniline                         | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 4-Nitroaniline                         | ND     | 4.4       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Nitrobenzene                           | ND     | 5.5       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2-Nitrophenol                          | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 4-Nitrophenol                          | ND     | 2.7       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Pentachlorophenol                      | ND     | 4.4       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Phenanthrene                           | 3.2    | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Phenol                                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Pyrene                                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Pyridine                               | ND     | 5.5       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Surr: 2-Fluorophenol                   | 0      | 21-111    | S    | %REC      | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Surr: Phenol-d5                        | 0      | 23.1-117  | S    | %REC      | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Surr: 2,4,6-Tribromophenol             | 0      | 22.7-88.9 | S    | %REC      | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Surr: Nitrobenzene-d5                  | 0      | 24.5-126  | S    | %REC      | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Surr: 2-Fluorobiphenyl                 | 0      | 21.2-129  | S    | %REC      | 1  | 9/27/2014 12:05:05 AM | 15506        |
| Surr: 4-Terphenyl-d14                  | 0      | 39.4-107  | S    | %REC      | 1  | 9/27/2014 12:05:05 AM | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                       | Analyst: RAA |
| Benzene                                | ND     | 0.66      |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| Toluene                                | ND     | 0.66      |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| Ethylbenzene                           | ND     | 0.66      |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.66      |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.66      |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.66      |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.66      |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.66      |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| Naphthalene                            | ND     | 1.3       |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| 1-Methylnaphthalene                    | 3.7    | 2.7       |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| 2-Methylnaphthalene                    | 4.4    | 2.7       |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| Acetone                                | ND     | 9.9       |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |
| Bromobenzene                           | ND     | 0.66      |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM  | 15512        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:35:00 PM

**Lab ID:** 1409C40-002

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: <b>RAA</b> |
| Bromodichloromethane               | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Bromoform                          | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Bromomethane                       | ND     | 2.0  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 2-Butanone                         | ND     | 6.6  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Carbon disulfide                   | ND     | 6.6  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Carbon tetrachloride               | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Chlorobenzene                      | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Chloroethane                       | ND     | 1.3  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Chloroform                         | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Chloromethane                      | ND     | 2.0  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 2-Chlorotoluene                    | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 4-Chlorotoluene                    | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| cis-1,2-DCE                        | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| cis-1,3-Dichloropropene            | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 1,2-Dibromo-3-chloropropane        | ND     | 1.3  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Dibromochloromethane               | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Dibromomethane                     | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 1,2-Dichlorobenzene                | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 1,3-Dichlorobenzene                | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 1,4-Dichlorobenzene                | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Dichlorodifluoromethane            | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 1,1-Dichloroethane                 | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 1,1-Dichloroethene                 | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 1,2-Dichloropropane                | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 1,3-Dichloropropane                | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 2,2-Dichloropropane                | ND     | 1.3  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 1,1-Dichloropropene                | ND     | 1.3  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Hexachlorobutadiene                | ND     | 1.3  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 2-Hexanone                         | ND     | 6.6  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Isopropylbenzene                   | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 4-Isopropyltoluene                 | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 4-Methyl-2-pentanone               | ND     | 6.6  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Methylene chloride                 | ND     | 2.0  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| n-Butylbenzene                     | ND     | 2.0  |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| n-Propylbenzene                    | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| sec-Butylbenzene                   | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| Styrene                            | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| tert-Butylbenzene                  | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.66 |      | mg/Kg-dry | 20 | 9/30/2014 6:55:06 PM | 15512               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:35:00 PM

**Lab ID:** 1409C40-002

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |       |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.66   |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| Tetrachloroethene (PCE)            | ND     | 0.66   |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| trans-1,2-DCE                      | ND     | 0.66   |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| trans-1,3-Dichloropropene          | ND     | 0.66   |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| 1,2,3-Trichlorobenzene             | ND     | 1.3    |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| 1,2,4-Trichlorobenzene             | ND     | 0.66   |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| 1,1,1-Trichloroethane              | ND     | 0.66   |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| 1,1,2-Trichloroethane              | ND     | 0.66   |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| Trichloroethene (TCE)              | ND     | 0.66   |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| Trichlorofluoromethane             | ND     | 0.66   |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| 1,2,3-Trichloropropane             | ND     | 1.3    |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| Vinyl chloride                     | ND     | 0.66   |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| Xylenes, Total                     | ND     | 1.3    |      | mg/Kg-dry           | 20 | 9/30/2014 6:55:06 PM | 15512 |
| Surr: Dibromofluoromethane         | 82.3   | 70-130 |      | %REC                | 20 | 9/30/2014 6:55:06 PM | 15512 |
| Surr: 1,2-Dichloroethane-d4        | 89.4   | 70-130 |      | %REC                | 20 | 9/30/2014 6:55:06 PM | 15512 |
| Surr: Toluene-d8                   | 97.1   | 70-130 |      | %REC                | 20 | 9/30/2014 6:55:06 PM | 15512 |
| Surr: 4-Bromofluorobenzene         | 109    | 70-130 |      | %REC                | 20 | 9/30/2014 6:55:06 PM | 15512 |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 11 of 64 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (2-4')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:50:00 PM

**Lab ID:** 1409C40-003

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 650    | 110      |      | mg/Kg-dry | 10 | 9/26/2014 6:34:17 PM  | 15513                |
| Motor Oil Range Organics (MRO)                 | ND     | 530      |      | mg/Kg-dry | 10 | 9/26/2014 6:34:17 PM  | 15513                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/26/2014 6:34:17 PM  | 15513                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 88     | 10       |      | mg/Kg-dry | 2  | 9/26/2014 6:50:27 PM  | 15512                |
| Surr: BFB                                      | 288    | 80-120   | S    | %REC      | 2  | 9/26/2014 6:50:27 PM  | 15512                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 5.5    | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 10/7/2014 12:52:50 PM | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Arsenic                                        | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Barium                                         | 75     | 0.11     |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Beryllium                                      | 0.19   | 0.16     |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Chromium                                       | 2.5    | 0.32     |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Cobalt                                         | 2.5    | 0.32     |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Lead                                           | 3.2    | 0.26     |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Nickel                                         | 3.0    | 0.53     |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Vanadium                                       | 12     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| Zinc                                           | 16     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:23:45 PM  | 15639                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.42     |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |
| Acenaphthylene                                 | ND     | 0.42     |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |
| Aniline                                        | ND     | 0.42     |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |
| Anthracene                                     | ND     | 0.42     |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |
| Azobenzene                                     | ND     | 0.42     |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |
| Benz(a)anthracene                              | ND     | 0.42     |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |
| Benzo(a)pyrene                                 | ND     | 0.42     |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |
| Benzo(b)fluoranthene                           | ND     | 0.42     |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 0.42     |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |
| Benzo(k)fluoranthene                           | ND     | 0.42     |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |
| Benzyl alcohol                                 | ND     | 0.42     |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (2-4')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:50:00 PM

**Lab ID:** 1409C40-003

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Butyl benzyl phthalate                 | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Carbazole                              | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 2-Chloronaphthalene                    | ND     | 0.53 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 2-Chlorophenol                         | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Chrysene                               | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Di-n-octyl phthalate                   | ND     | 0.85 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Dibenzofuran                           | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.53 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Diethyl phthalate                      | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Dimethyl phthalate                     | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 0.85 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 0.63 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Fluoranthene                           | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Fluorene                               | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Hexachlorobenzene                      | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Hexachlorobutadiene                    | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Hexachloroethane                       | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 1-Methylnaphthalene                    | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |
| 2-Methylnaphthalene                    | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/27/2014 12:33:03 AM | 15506        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 12-3 (2-4')

Project: GROUP 9

Collection Date: 9/23/2014 1:50:00 PM

Lab ID: 1409C40-003

Matrix: SOIL

Received Date: 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF           | Date Analyzed         | Batch |
|----------------------------------------|--------|-----------|------|-----------|--------------|-----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           | Analyst: JDC |                       |       |
| 2-Methylphenol                         | ND     | 1.1       |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| 3+4-Methylphenol                       | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| N-Nitrosodi-n-propylamine              | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| N-Nitrosodiphenylamine                 | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Naphthalene                            | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| 2-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| 3-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| 4-Nitroaniline                         | ND     | 0.85      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Nitrobenzene                           | ND     | 1.1       |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| 2-Nitrophenol                          | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| 4-Nitrophenol                          | ND     | 0.53      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Pentachlorophenol                      | ND     | 0.85      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Phenanthrene                           | 1.0    | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Phenol                                 | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Pyrene                                 | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Pyridine                               | ND     | 1.1       |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| 2,4,5-Trichlorophenol                  | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| 2,4,6-Trichlorophenol                  | ND     | 0.42      |      | mg/Kg-dry | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Surr: 2-Fluorophenol                   | 66.6   | 21-111    |      | %REC      | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Surr: Phenol-d5                        | 74.2   | 23.1-117  |      | %REC      | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Surr: 2,4,6-Tribromophenol             | 33.4   | 22.7-88.9 |      | %REC      | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Surr: Nitrobenzene-d5                  | 85.3   | 24.5-126  |      | %REC      | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Surr: 2-Fluorobiphenyl                 | 76.6   | 21.2-129  |      | %REC      | 1            | 9/27/2014 12:33:03 AM | 15506 |
| Surr: 4-Terphenyl-d14                  | 76.7   | 39.4-107  |      | %REC      | 1            | 9/27/2014 12:33:03 AM | 15506 |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           | Analyst: RAA |                       |       |
| Benzene                                | ND     | 0.10      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| Toluene                                | ND     | 0.10      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| Ethylbenzene                           | ND     | 0.10      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.10      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| 1,2,4-Trimethylbenzene                 | ND     | 0.10      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| 1,3,5-Trimethylbenzene                 | ND     | 0.10      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.10      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.10      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| Naphthalene                            | ND     | 0.20      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| 1-Methylnaphthalene                    | 0.56   | 0.41      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| 2-Methylnaphthalene                    | ND     | 0.41      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| Acetone                                | ND     | 1.5       |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |
| Bromobenzene                           | ND     | 0.10      |      | mg/Kg-dry | 2            | 9/30/2014 7:22:59 PM  | 15512 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (2-4')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:50:00 PM

**Lab ID:** 1409C40-003

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Bromoform                          | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Bromomethane                       | ND     | 0.31 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 2-Butanone                         | ND     | 1.0  |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Carbon disulfide                   | ND     | 1.0  |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Carbon tetrachloride               | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Chlorobenzene                      | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Chloroethane                       | ND     | 0.20 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Chloroform                         | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Chloromethane                      | ND     | 0.31 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 2-Chlorotoluene                    | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 4-Chlorotoluene                    | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| cis-1,2-DCE                        | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| cis-1,3-Dichloropropene            | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.20 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Dibromochloromethane               | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Dibromomethane                     | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 1,2-Dichlorobenzene                | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 1,3-Dichlorobenzene                | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 1,4-Dichlorobenzene                | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Dichlorodifluoromethane            | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 1,1-Dichloroethane                 | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 1,1-Dichloroethene                 | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 1,2-Dichloropropane                | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 1,3-Dichloropropane                | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 2,2-Dichloropropane                | ND     | 0.20 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 1,1-Dichloropropene                | ND     | 0.20 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Hexachlorobutadiene                | ND     | 0.20 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 2-Hexanone                         | ND     | 1.0  |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Isopropylbenzene                   | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 4-Isopropyltoluene                 | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 4-Methyl-2-pentanone               | ND     | 1.0  |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Methylene chloride                 | ND     | 0.31 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| n-Butylbenzene                     | ND     | 0.31 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| n-Propylbenzene                    | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| sec-Butylbenzene                   | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| Styrene                            | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| tert-Butylbenzene                  | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.10 |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (2-4')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 1:50:00 PM

**Lab ID:** 1409C40-003

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.10   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| Tetrachloroethene (PCE)            | ND     | 0.10   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| trans-1,2-DCE                      | ND     | 0.10   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| trans-1,3-Dichloropropene          | ND     | 0.10   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| 1,2,3-Trichlorobenzene             | ND     | 0.20   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| 1,2,4-Trichlorobenzene             | ND     | 0.10   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| 1,1,1-Trichloroethane              | ND     | 0.10   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| 1,1,2-Trichloroethane              | ND     | 0.10   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| Trichloroethene (TCE)              | ND     | 0.10   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| Trichlorofluoromethane             | ND     | 0.10   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| 1,2,3-Trichloropropane             | ND     | 0.20   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| Vinyl chloride                     | ND     | 0.10   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| Xylenes, Total                     | ND     | 0.20   |      | mg/Kg-dry | 2  | 9/30/2014 7:22:59 PM | 15512               |
| Surr: Dibromofluoromethane         | 82.6   | 70-130 |      | %REC      | 2  | 9/30/2014 7:22:59 PM | 15512               |
| Surr: 1,2-Dichloroethane-d4        | 85.5   | 70-130 |      | %REC      | 2  | 9/30/2014 7:22:59 PM | 15512               |
| Surr: Toluene-d8                   | 92.7   | 70-130 |      | %REC      | 2  | 9/30/2014 7:22:59 PM | 15512               |
| Surr: 4-Bromofluorobenzene         | 107    | 70-130 |      | %REC      | 2  | 9/30/2014 7:22:59 PM | 15512               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 2:00:00 PM

**Lab ID:** 1409C40-004

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 110    | 11       |      | mg/Kg-dry | 1  | 9/26/2014 6:55:50 PM  | 15513                |
| Motor Oil Range Organics (MRO)                 | ND     | 53       |      | mg/Kg-dry | 1  | 9/26/2014 6:55:50 PM  | 15513                |
| Surr: DNOP                                     | 91.4   | 57.9-140 |      | %REC      | 1  | 9/26/2014 6:55:50 PM  | 15513                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 41     | 6.7      |      | mg/Kg-dry | 2  | 9/27/2014 9:28:50 PM  | R21498               |
| Surr: BFB                                      | 207    | 80-120   | S    | %REC      | 2  | 9/27/2014 9:28:50 PM  | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 4.0    | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.035    |      | mg/Kg-dry | 1  | 10/7/2014 12:54:41 PM | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Arsenic                                        | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Barium                                         | 110    | 0.10     |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Beryllium                                      | ND     | 0.16     |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Chromium                                       | 4.7    | 0.31     |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Cobalt                                         | 3.1    | 0.31     |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Lead                                           | 1.3    | 0.26     |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Nickel                                         | 2.8    | 0.52     |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Vanadium                                       | 12     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| Zinc                                           | 15     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:25:00 PM  | 15639                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM  | 15506                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 2:00:00 PM

**Lab ID:** 1409C40-004

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 1-Methylnaphthalene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2-Methylnaphthalene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 2:00:00 PM

**Lab ID:** 1409C40-004

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Naphthalene                            | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Phenanthrene                           | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Surr: 2-Fluorophenol                   | 49.6   | 21-111    |      | %REC      | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Surr: Phenol-d5                        | 57.7   | 23.1-117  |      | %REC      | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Surr: 2,4,6-Tribromophenol             | 47.3   | 22.7-88.9 |      | %REC      | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Surr: Nitrobenzene-d5                  | 66.7   | 24.5-126  |      | %REC      | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Surr: 2-Fluorobiphenyl                 | 63.1   | 21.2-129  |      | %REC      | 1  | 9/26/2014 9:17:54 PM | 15506        |
| Surr: 4-Terphenyl-d14                  | 63.8   | 39.4-107  |      | %REC      | 1  | 9/26/2014 9:17:54 PM | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.067     |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Toluene                                | ND     | 0.067     |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Ethylbenzene                           | ND     | 0.067     |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.067     |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.067     |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.067     |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.067     |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.067     |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Naphthalene                            | ND     | 0.13      |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1-Methylnaphthalene                    | ND     | 0.27      |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 2-Methylnaphthalene                    | ND     | 0.27      |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Acetone                                | ND     | 1.0       |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Bromobenzene                           | ND     | 0.067     |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 2:00:00 PM

**Lab ID:** 1409C40-004

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|-------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Bromoform                          | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Bromomethane                       | ND     | 0.20  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 2-Butanone                         | ND     | 0.67  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Carbon disulfide                   | ND     | 0.67  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Carbon tetrachloride               | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Chlorobenzene                      | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Chloroethane                       | ND     | 0.13  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Chloroform                         | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Chloromethane                      | ND     | 0.20  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 2-Chlorotoluene                    | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 4-Chlorotoluene                    | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| cis-1,2-DCE                        | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| cis-1,3-Dichloropropene            | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.13  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Dibromochloromethane               | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Dibromomethane                     | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,2-Dichlorobenzene                | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,3-Dichlorobenzene                | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,4-Dichlorobenzene                | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Dichlorodifluoromethane            | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,1-Dichloroethane                 | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,1-Dichloroethene                 | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,2-Dichloropropane                | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,3-Dichloropropane                | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 2,2-Dichloropropane                | ND     | 0.13  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,1-Dichloropropene                | ND     | 0.13  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Hexachlorobutadiene                | ND     | 0.13  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 2-Hexanone                         | ND     | 0.67  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Isopropylbenzene                   | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 4-Isopropyltoluene                 | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 4-Methyl-2-pentanone               | ND     | 0.67  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Methylene chloride                 | ND     | 0.20  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| n-Butylbenzene                     | ND     | 0.20  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| n-Propylbenzene                    | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| sec-Butylbenzene                   | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| Styrene                            | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| tert-Butylbenzene                  | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.067 |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 2:00:00 PM

**Lab ID:** 1409C40-004

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.067  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| Tetrachloroethene (PCE)            | ND     | 0.067  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| trans-1,2-DCE                      | ND     | 0.067  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| trans-1,3-Dichloropropene          | ND     | 0.067  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| 1,2,3-Trichlorobenzene             | ND     | 0.13   |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| 1,2,4-Trichlorobenzene             | ND     | 0.067  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| 1,1,1-Trichloroethane              | ND     | 0.067  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| 1,1,2-Trichloroethane              | ND     | 0.067  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| Trichloroethene (TCE)              | ND     | 0.067  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| Trichlorofluoromethane             | ND     | 0.067  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| 1,2,3-Trichloropropane             | ND     | 0.13   |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| Vinyl chloride                     | ND     | 0.067  |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| Xylenes, Total                     | ND     | 0.13   |      | mg/Kg-dry | 2  | 9/30/2014 7:50:59 PM | 15512               |
| Surr: Dibromofluoromethane         | 79.6   | 70-130 |      | %REC      | 2  | 9/30/2014 7:50:59 PM | 15512               |
| Surr: 1,2-Dichloroethane-d4        | 83.5   | 70-130 |      | %REC      | 2  | 9/30/2014 7:50:59 PM | 15512               |
| Surr: Toluene-d8                   | 91.1   | 70-130 |      | %REC      | 2  | 9/30/2014 7:50:59 PM | 15512               |
| Surr: 4-Bromofluorobenzene         | 99.3   | 70-130 |      | %REC      | 2  | 9/30/2014 7:50:59 PM | 15512               |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 21 of 64 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 2:05:00 PM

**Lab ID:** 1409C40-005

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 410    | 10       |      | mg/Kg-dry | 1  | 9/26/2014 7:17:26 PM  | 15513                |
| Motor Oil Range Organics (MRO)                 | ND     | 52       |      | mg/Kg-dry | 1  | 9/26/2014 7:17:26 PM  | 15513                |
| Surr: DNOP                                     | 95.9   | 57.9-140 |      | %REC      | 1  | 9/26/2014 7:17:26 PM  | 15513                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 140    | 25       |      | mg/Kg-dry | 5  | 9/26/2014 8:44:53 PM  | 15512                |
| Surr: BFB                                      | 164    | 80-120   | S    | %REC      | 5  | 9/26/2014 8:44:53 PM  | 15512                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 3.7    | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 10/7/2014 1:00:17 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Barium                                         | 210    | 0.10     |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Beryllium                                      | 0.16   | 0.15     |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Chromium                                       | 7.6    | 0.31     |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Cobalt                                         | 3.6    | 0.31     |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Lead                                           | 1.3    | 0.25     |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Nickel                                         | 2.4    | 0.51     |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Vanadium                                       | 22     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| Zinc                                           | 17     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:26:15 PM  | 15639                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM  | 15506                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 2:05:00 PM

**Lab ID:** 1409C40-005

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Di-n-octyl phthalate                   | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 1-Methylnaphthalene                    | 2.2    | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2-Methylnaphthalene                    | 3.2    | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 12-3 (26-28')

Project: GROUP 9

Collection Date: 9/23/2014 2:05:00 PM

Lab ID: 1409C40-005

Matrix: SOIL

Received Date: 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Naphthalene                            | 1.2    | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 4-Nitroaniline                         | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Pentachlorophenol                      | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Phenanthrene                           | 0.28   | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Surr: 2-Fluorophenol                   | 76.6   | 21-111    |      | %REC      | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Surr: Phenol-d5                        | 72.0   | 23.1-117  |      | %REC      | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Surr: 2,4,6-Tribromophenol             | 67.2   | 22.7-88.9 |      | %REC      | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Surr: Nitrobenzene-d5                  | 87.3   | 24.5-126  |      | %REC      | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Surr: 2-Fluorobiphenyl                 | 80.1   | 21.2-129  |      | %REC      | 1  | 9/26/2014 9:45:55 PM | 15506        |
| Surr: 4-Terphenyl-d14                  | 84.1   | 39.4-107  |      | %REC      | 1  | 9/26/2014 9:45:55 PM | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.25      |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Toluene                                | ND     | 0.25      |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Ethylbenzene                           | 0.52   | 0.25      |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.25      |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,2,4-Trimethylbenzene                 | 5.5    | 0.25      |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,3,5-Trimethylbenzene                 | 2.1    | 0.25      |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.25      |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.25      |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Naphthalene                            | 1.2    | 0.50      |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1-Methylnaphthalene                    | 1.7    | 1.0       |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 2-Methylnaphthalene                    | 2.9    | 1.0       |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Acetone                                | ND     | 3.8       |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Bromobenzene                           | ND     | 0.25      |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 2:05:00 PM

**Lab ID:** 1409C40-005

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Bromoform                          | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Bromomethane                       | ND     | 0.75 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 2-Butanone                         | ND     | 2.5  |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Carbon disulfide                   | ND     | 2.5  |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Carbon tetrachloride               | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Chlorobenzene                      | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Chloroethane                       | ND     | 0.50 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Chloroform                         | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Chloromethane                      | ND     | 0.75 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 2-Chlorotoluene                    | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 4-Chlorotoluene                    | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| cis-1,2-DCE                        | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| cis-1,3-Dichloropropene            | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.50 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Dibromochloromethane               | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Dibromomethane                     | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,2-Dichlorobenzene                | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,3-Dichlorobenzene                | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,4-Dichlorobenzene                | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Dichlorodifluoromethane            | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,1-Dichloroethane                 | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,1-Dichloroethene                 | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,2-Dichloropropane                | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,3-Dichloropropane                | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 2,2-Dichloropropane                | ND     | 0.50 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,1-Dichloropropene                | ND     | 0.50 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Hexachlorobutadiene                | ND     | 0.50 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 2-Hexanone                         | ND     | 2.5  |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Isopropylbenzene                   | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 4-Isopropyltoluene                 | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 4-Methyl-2-pentanone               | ND     | 2.5  |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Methylene chloride                 | ND     | 0.75 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| n-Butylbenzene                     | ND     | 0.75 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| n-Propylbenzene                    | 0.82   | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| sec-Butylbenzene                   | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| Styrene                            | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| tert-Butylbenzene                  | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.25 |      | mg/Kg-dry | 5  | 9/30/2014 8:19:04 PM | 15512        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-3 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 2:05:00 PM

**Lab ID:** 1409C40-005

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |       |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.25   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| Tetrachloroethene (PCE)            | ND     | 0.25   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| trans-1,2-DCE                      | ND     | 0.25   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| trans-1,3-Dichloropropene          | ND     | 0.25   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| 1,2,3-Trichlorobenzene             | ND     | 0.50   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| 1,2,4-Trichlorobenzene             | ND     | 0.25   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| 1,1,1-Trichloroethane              | ND     | 0.25   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| 1,1,2-Trichloroethane              | ND     | 0.25   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| Trichloroethene (TCE)              | ND     | 0.25   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| Trichlorofluoromethane             | ND     | 0.25   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| 1,2,3-Trichloropropane             | ND     | 0.50   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| Vinyl chloride                     | ND     | 0.25   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| Xylenes, Total                     | 3.3    | 0.50   |      | mg/Kg-dry           | 5  | 9/30/2014 8:19:04 PM | 15512 |
| Surr: Dibromofluoromethane         | 78.4   | 70-130 |      | %REC                | 5  | 9/30/2014 8:19:04 PM | 15512 |
| Surr: 1,2-Dichloroethane-d4        | 82.3   | 70-130 |      | %REC                | 5  | 9/30/2014 8:19:04 PM | 15512 |
| Surr: Toluene-d8                   | 99.6   | 70-130 |      | %REC                | 5  | 9/30/2014 8:19:04 PM | 15512 |
| Surr: 4-Bromofluorobenzene         | 94.9   | 70-130 |      | %REC                | 5  | 9/30/2014 8:19:04 PM | 15512 |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 26 of 64 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 4:40:00 PM

**Lab ID:** 1409C40-006

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 2800   | 110      |      | mg/Kg-dry | 10 | 9/26/2014 7:38:52 PM  | 15513                |
| Motor Oil Range Organics (MRO)                 | 1900   | 550      |      | mg/Kg-dry | 10 | 9/26/2014 7:38:52 PM  | 15513                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/26/2014 7:38:52 PM  | 15513                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 16       |      | mg/Kg-dry | 5  | 9/27/2014 9:58:54 PM  | R21498               |
| Surr: BFB                                      | 126    | 80-120   | S    | %REC      | 5  | 9/27/2014 9:58:54 PM  | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 9.0    | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.085  | 0.036    |      | mg/Kg-dry | 1  | 10/7/2014 1:02:01 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| Arsenic                                        | 3.3    | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| Barium                                         | 330    | 0.22     |      | mg/Kg-dry | 2  | 10/2/2014 1:59:03 PM  | 15639                |
| Beryllium                                      | 0.39   | 0.16     |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| Cadmium                                        | 0.25   | 0.11     |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| Chromium                                       | 8.5    | 0.33     |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| Cobalt                                         | 4.2    | 0.33     |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| Lead                                           | 7.6    | 0.27     |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| Nickel                                         | 6.4    | 0.55     |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| Vanadium                                       | 20     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| Zinc                                           | 42     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:27:30 PM  | 15639                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |
| Acenaphthylene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |
| Aniline                                        | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |
| Anthracene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |
| Azobenzene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |
| Benz(a)anthracene                              | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |
| Benzo(a)pyrene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |
| Benzo(b)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |
| Benzo(k)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |
| Benzoic acid                                   | ND     | 5.5      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |
| Benzyl alcohol                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM  | 15506                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 4:40:00 PM

**Lab ID:** 1409C40-006

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Butyl benzyl phthalate                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Carbazole                              | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 4-Chloroaniline                        | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2-Chloronaphthalene                    | ND     | 2.7 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2-Chlorophenol                         | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Chrysene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Di-n-butyl phthalate                   | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Di-n-octyl phthalate                   | ND     | 4.4 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Dibenzofuran                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.7 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Diethyl phthalate                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Dimethyl phthalate                     | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 4.4 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 3.3 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Fluoranthene                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Fluorene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Hexachlorobenzene                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Hexachlorobutadiene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Hexachloroethane                       | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Isophorone                             | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 1-Methylnaphthalene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2-Methylnaphthalene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 12-2 (0-0.5')

Project: GROUP 9

Collection Date: 9/23/2014 4:40:00 PM

Lab ID: 1409C40-006

Matrix: SOIL

Received Date: 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 5.5       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 3+4-Methylphenol                       | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Naphthalene                            | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2-Nitroaniline                         | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 3-Nitroaniline                         | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 4-Nitroaniline                         | ND     | 4.4       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Nitrobenzene                           | ND     | 5.5       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2-Nitrophenol                          | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 4-Nitrophenol                          | ND     | 2.7       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Pentachlorophenol                      | ND     | 4.4       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Phenanthrene                           | 3.2    | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Phenol                                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Pyrene                                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Pyridine                               | ND     | 5.5       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Surr: 2-Fluorophenol                   | 0      | 21-111    | S    | %REC      | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Surr: Phenol-d5                        | 0      | 23.1-117  | S    | %REC      | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Surr: 2,4,6-Tribromophenol             | 0      | 22.7-88.9 | S    | %REC      | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Surr: Nitrobenzene-d5                  | 0      | 24.5-126  | S    | %REC      | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Surr: 2-Fluorobiphenyl                 | 0      | 21.2-129  | S    | %REC      | 1  | 9/27/2014 2:53:04 AM | 15506        |
| Surr: 4-Terphenyl-d14                  | 0      | 39.4-107  | S    | %REC      | 1  | 9/27/2014 2:53:04 AM | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| Toluene                                | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| Ethylbenzene                           | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| Naphthalene                            | ND     | 0.32      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| 1-Methylnaphthalene                    | ND     | 0.65      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| 2-Methylnaphthalene                    | ND     | 0.65      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| Acetone                                | ND     | 2.4       |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |
| Bromobenzene                           | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/30/2014 9:42:33 PM | 15512        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 4:40:00 PM

**Lab ID:** 1409C40-006

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL   | Qual | Units               | DF | Date Analyzed        | Batch |
|------------------------------------|--------|------|------|---------------------|----|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      | Analyst: <b>RAA</b> |    |                      |       |
| Bromodichloromethane               | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Bromoform                          | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Bromomethane                       | ND     | 0.48 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 2-Butanone                         | ND     | 1.6  |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Carbon disulfide                   | ND     | 1.6  |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Carbon tetrachloride               | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Chlorobenzene                      | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Chloroethane                       | ND     | 0.32 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Chloroform                         | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Chloromethane                      | ND     | 0.48 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 2-Chlorotoluene                    | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 4-Chlorotoluene                    | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| cis-1,2-DCE                        | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| cis-1,3-Dichloropropene            | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.32 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Dibromochloromethane               | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Dibromomethane                     | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,2-Dichlorobenzene                | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,3-Dichlorobenzene                | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,4-Dichlorobenzene                | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Dichlorodifluoromethane            | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,1-Dichloroethane                 | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,1-Dichloroethene                 | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,2-Dichloropropane                | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,3-Dichloropropane                | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 2,2-Dichloropropane                | ND     | 0.32 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,1-Dichloropropene                | ND     | 0.32 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Hexachlorobutadiene                | ND     | 0.32 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 2-Hexanone                         | ND     | 1.6  |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Isopropylbenzene                   | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 4-Isopropyltoluene                 | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 4-Methyl-2-pentanone               | ND     | 1.6  |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Methylene chloride                 | ND     | 0.48 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| n-Butylbenzene                     | ND     | 0.48 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| n-Propylbenzene                    | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| sec-Butylbenzene                   | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Styrene                            | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| tert-Butylbenzene                  | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.16 |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 4:40:00 PM

**Lab ID:** 1409C40-006

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |       |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Tetrachloroethene (PCE)            | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| trans-1,2-DCE                      | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| trans-1,3-Dichloropropene          | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,2,3-Trichlorobenzene             | ND     | 0.32   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,2,4-Trichlorobenzene             | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,1,1-Trichloroethane              | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,1,2-Trichloroethane              | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Trichloroethene (TCE)              | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Trichlorofluoromethane             | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| 1,2,3-Trichloropropane             | ND     | 0.32   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Vinyl chloride                     | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Xylenes, Total                     | ND     | 0.32   |      | mg/Kg-dry           | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Surr: Dibromofluoromethane         | 77.1   | 70-130 |      | %REC                | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Surr: 1,2-Dichloroethane-d4        | 79.4   | 70-130 |      | %REC                | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Surr: Toluene-d8                   | 85.4   | 70-130 |      | %REC                | 5  | 9/30/2014 9:42:33 PM | 15512 |
| Surr: 4-Bromofluorobenzene         | 97.9   | 70-130 |      | %REC                | 5  | 9/30/2014 9:42:33 PM | 15512 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 4:50:00 PM

**Lab ID:** 1409C40-007

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 3400   | 110      |      | mg/Kg-dry | 10 | 9/26/2014 8:00:27 PM  | 15513                |
| Motor Oil Range Organics (MRO)                 | 2500   | 540      |      | mg/Kg-dry | 10 | 9/26/2014 8:00:27 PM  | 15513                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/26/2014 8:00:27 PM  | 15513                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.5      |      | mg/Kg-dry | 1  | 9/27/2014 10:29:00 PM | R21498               |
| Surr: BFB                                      | 102    | 80-120   |      | %REC      | 1  | 9/27/2014 10:29:00 PM | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 8.4    | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.10   | 0.035    |      | mg/Kg-dry | 1  | 10/7/2014 1:03:46 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Arsenic                                        | 3.0    | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Barium                                         | 230    | 0.10     |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Beryllium                                      | 0.41   | 0.16     |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Cadmium                                        | 0.21   | 0.10     |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Chromium                                       | 11     | 0.31     |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Cobalt                                         | 4.2    | 0.31     |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Lead                                           | 7.4    | 0.26     |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Nickel                                         | 6.3    | 0.52     |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Vanadium                                       | 21     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| Zinc                                           | 42     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 1:28:45 PM  | 15639                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |
| Acenaphthylene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |
| Aniline                                        | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |
| Anthracene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |
| Azobenzene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |
| Benz(a)anthracene                              | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |
| Benzo(a)pyrene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |
| Benzo(b)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |
| Benzo(k)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |
| Benzoic acid                                   | ND     | 5.5      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |
| Benzyl alcohol                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 4:50:00 PM

**Lab ID:** 1409C40-007

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Butyl benzyl phthalate                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Carbazole                              | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 4-Chloroaniline                        | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 2-Chloronaphthalene                    | ND     | 2.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 2-Chlorophenol                         | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Chrysene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Di-n-butyl phthalate                   | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Di-n-octyl phthalate                   | ND     | 4.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Dibenzofuran                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Diethyl phthalate                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Dimethyl phthalate                     | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 4.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 3.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Fluoranthene                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Fluorene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Hexachlorobenzene                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Hexachlorobutadiene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Hexachloroethane                       | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| Isophorone                             | ND     | 5.5 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 1-Methylnaphthalene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |
| 2-Methylnaphthalene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM | 15506        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 12-2 (0.5-2')

Project: GROUP 9

Collection Date: 9/23/2014 4:50:00 PM

Lab ID: 1409C40-007

Matrix: SOIL

Received Date: 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 5.5       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| 3+4-Methylphenol                       | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Naphthalene                            | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| 2-Nitroaniline                         | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| 3-Nitroaniline                         | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| 4-Nitroaniline                         | ND     | 4.4       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Nitrobenzene                           | ND     | 5.5       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| 2-Nitrophenol                          | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| 4-Nitrophenol                          | ND     | 2.7       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Pentachlorophenol                      | ND     | 4.4       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Phenanthrene                           | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Phenol                                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Pyrene                                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Pyridine                               | ND     | 5.5       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Surr: 2-Fluorophenol                   | 0      | 21-111    | S    | %REC      | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Surr: Phenol-d5                        | 0      | 23.1-117  | S    | %REC      | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Surr: 2,4,6-Tribromophenol             | 0      | 22.7-88.9 | S    | %REC      | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Surr: Nitrobenzene-d5                  | 0      | 24.5-126  | S    | %REC      | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Surr: 2-Fluorobiphenyl                 | 0      | 21.2-129  | S    | %REC      | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| Surr: 4-Terphenyl-d14                  | 0      | 39.4-107  | S    | %REC      | 1  | 9/27/2014 1:01:02 AM  | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                       | Analyst: RAA |
| Benzene                                | ND     | 0.035     |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| Toluene                                | ND     | 0.035     |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| Ethylbenzene                           | ND     | 0.035     |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.035     |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.035     |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.035     |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.035     |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.035     |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| Naphthalene                            | ND     | 0.069     |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| 1-Methylnaphthalene                    | ND     | 0.14      |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| 2-Methylnaphthalene                    | ND     | 0.14      |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| Acetone                                | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |
| Bromobenzene                           | ND     | 0.035     |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 4:50:00 PM

**Lab ID:** 1409C40-007

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed         | Batch               |
|------------------------------------|--------|-------|------|-----------|----|-----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                       | Analyst: <b>RAA</b> |
| Bromodichloromethane               | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Bromoform                          | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Bromomethane                       | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 2-Butanone                         | ND     | 0.35  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Carbon disulfide                   | ND     | 0.35  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Carbon tetrachloride               | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Chlorobenzene                      | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Chloroethane                       | ND     | 0.069 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Chloroform                         | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Chloromethane                      | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 2-Chlorotoluene                    | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 4-Chlorotoluene                    | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| cis-1,2-DCE                        | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| cis-1,3-Dichloropropene            | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.069 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Dibromochloromethane               | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Dibromomethane                     | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,2-Dichlorobenzene                | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,3-Dichlorobenzene                | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,4-Dichlorobenzene                | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Dichlorodifluoromethane            | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,1-Dichloroethane                 | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,1-Dichloroethene                 | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,2-Dichloropropane                | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,3-Dichloropropane                | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 2,2-Dichloropropane                | ND     | 0.069 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,1-Dichloropropene                | ND     | 0.069 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Hexachlorobutadiene                | ND     | 0.069 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 2-Hexanone                         | ND     | 0.35  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Isopropylbenzene                   | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 4-Isopropyltoluene                 | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 4-Methyl-2-pentanone               | ND     | 0.35  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Methylene chloride                 | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| n-Butylbenzene                     | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| n-Propylbenzene                    | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| sec-Butylbenzene                   | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Styrene                            | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| tert-Butylbenzene                  | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 4:50:00 PM

**Lab ID:** 1409C40-007

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed         | Batch               |
|------------------------------------|--------|--------|------|-----------|----|-----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                       | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Tetrachloroethene (PCE)            | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| trans-1,2-DCE                      | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| trans-1,3-Dichloropropene          | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,2,3-Trichlorobenzene             | ND     | 0.069  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,2,4-Trichlorobenzene             | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,1,1-Trichloroethane              | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,1,2-Trichloroethane              | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Trichloroethene (TCE)              | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Trichlorofluoromethane             | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| 1,2,3-Trichloropropane             | ND     | 0.069  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Vinyl chloride                     | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Xylenes, Total                     | ND     | 0.069  |      | mg/Kg-dry | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Surr: Dibromofluoromethane         | 77.6   | 70-130 |      | %REC      | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Surr: 1,2-Dichloroethane-d4        | 79.6   | 70-130 |      | %REC      | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Surr: Toluene-d8                   | 93.8   | 70-130 |      | %REC      | 1  | 9/30/2014 10:10:30 PM | 15512               |
| Surr: 4-Bromofluorobenzene         | 101    | 70-130 |      | %REC      | 1  | 9/30/2014 10:10:30 PM | 15512               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (6-8')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 5:00:00 PM

**Lab ID:** 1409C40-008

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 1300   | 110      |      | mg/Kg-dry | 10 | 9/26/2014 8:21:56 PM  | 15513                |
| Motor Oil Range Organics (MRO)                 | 1100   | 560      |      | mg/Kg-dry | 10 | 9/26/2014 8:21:56 PM  | 15513                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/26/2014 8:21:56 PM  | 15513                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 36       |      | mg/Kg-dry | 10 | 9/28/2014 12:59:26 AM | R21498               |
| Surr: BFB                                      | 117    | 80-120   |      | %REC      | 10 | 9/28/2014 12:59:26 AM | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 12     | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.17   | 0.036    |      | mg/Kg-dry | 1  | 10/7/2014 1:36:06 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| Arsenic                                        | 3.4    | 2.8      |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| Barium                                         | 330    | 0.22     |      | mg/Kg-dry | 2  | 10/2/2014 2:00:17 PM  | 15639                |
| Beryllium                                      | 0.47   | 0.17     |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| Chromium                                       | 7.9    | 0.34     |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| Cobalt                                         | 4.4    | 0.34     |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| Lead                                           | 7.1    | 0.28     |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| Nickel                                         | 7.0    | 0.56     |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| Vanadium                                       | 23     | 2.8      |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| Zinc                                           | 97     | 2.8      |      | mg/Kg-dry | 1  | 10/2/2014 1:30:01 PM  | 15639                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 2.3      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |
| Acenaphthylene                                 | ND     | 2.3      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |
| Aniline                                        | ND     | 2.3      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |
| Anthracene                                     | ND     | 2.3      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |
| Azobenzene                                     | ND     | 2.3      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |
| Benz(a)anthracene                              | ND     | 2.3      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |
| Benzo(a)pyrene                                 | ND     | 2.3      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |
| Benzo(b)fluoranthene                           | ND     | 2.3      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 2.3      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |
| Benzo(k)fluoranthene                           | ND     | 2.3      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |
| Benzoic acid                                   | ND     | 5.7      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |
| Benzyl alcohol                                 | ND     | 2.3      |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (6-8")

**Project:** GROUP 9

**Collection Date:** 9/23/2014 5:00:00 PM

**Lab ID:** 1409C40-008

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Butyl benzyl phthalate                 | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Carbazole                              | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 5.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 4-Chloroaniline                        | ND     | 5.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 2-Chloronaphthalene                    | ND     | 2.9 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 2-Chlorophenol                         | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Chrysene                               | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Di-n-butyl phthalate                   | ND     | 5.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Di-n-octyl phthalate                   | ND     | 4.6 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Dibenzofuran                           | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.9 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Diethyl phthalate                      | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Dimethyl phthalate                     | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 4.6 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 3.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 5.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 5.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 5.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Fluoranthene                           | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Fluorene                               | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Hexachlorobenzene                      | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Hexachlorobutadiene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Hexachloroethane                       | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| Isophorone                             | ND     | 5.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 1-Methylnaphthalene                    | 8.6    | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |
| 2-Methylnaphthalene                    | 6.1    | 2.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM | 15506        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 12-2 (6-8")

Project: GROUP 9

Collection Date: 9/23/2014 5:00:00 PM

Lab ID: 1409C40-008

Matrix: SOIL

Received Date: 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 5.7       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| 3+4-Methylphenol                       | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Naphthalene                            | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| 2-Nitroaniline                         | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| 3-Nitroaniline                         | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| 4-Nitroaniline                         | ND     | 4.6       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Nitrobenzene                           | ND     | 5.7       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| 2-Nitrophenol                          | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| 4-Nitrophenol                          | ND     | 2.9       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Pentachlorophenol                      | ND     | 4.6       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Phenanthrene                           | 4.3    | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Phenol                                 | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Pyrene                                 | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Pyridine                               | ND     | 5.7       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 2.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Surr: 2-Fluorophenol                   | 0      | 21-111    | S    | %REC      | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Surr: Phenol-d5                        | 0      | 23.1-117  | S    | %REC      | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Surr: 2,4,6-Tribromophenol             | 0      | 22.7-88.9 | S    | %REC      | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Surr: Nitrobenzene-d5                  | 0      | 24.5-126  | S    | %REC      | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Surr: 2-Fluorobiphenyl                 | 0      | 21.2-129  | S    | %REC      | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| Surr: 4-Terphenyl-d14                  | 0      | 39.4-107  | S    | %REC      | 1  | 9/27/2014 1:29:02 AM  | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                       | Analyst: RAA |
| Benzene                                | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| Toluene                                | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| Ethylbenzene                           | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| Naphthalene                            | 1.3    | 0.72      |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| 1-Methylnaphthalene                    | 6.8    | 1.4       |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| 2-Methylnaphthalene                    | 4.8    | 1.4       |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| Acetone                                | ND     | 5.4       |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |
| Bromobenzene                           | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (6-8")

**Project:** GROUP 9

**Collection Date:** 9/23/2014 5:00:00 PM

**Lab ID:** 1409C40-008

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF                  | Date Analyzed         | Batch |
|------------------------------------|--------|------|------|-----------|---------------------|-----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           | Analyst: <b>RAA</b> |                       |       |
| Bromodichloromethane               | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Bromoform                          | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Bromomethane                       | ND     | 1.1  |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 2-Butanone                         | ND     | 3.6  |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Carbon disulfide                   | ND     | 3.6  |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Carbon tetrachloride               | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Chlorobenzene                      | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Chloroethane                       | ND     | 0.72 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Chloroform                         | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Chloromethane                      | ND     | 1.1  |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 2-Chlorotoluene                    | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 4-Chlorotoluene                    | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| cis-1,2-DCE                        | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| cis-1,3-Dichloropropene            | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.72 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Dibromochloromethane               | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Dibromomethane                     | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 1,2-Dichlorobenzene                | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 1,3-Dichlorobenzene                | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 1,4-Dichlorobenzene                | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Dichlorodifluoromethane            | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 1,1-Dichloroethane                 | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 1,1-Dichloroethene                 | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 1,2-Dichloropropane                | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 1,3-Dichloropropane                | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 2,2-Dichloropropane                | ND     | 0.72 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 1,1-Dichloropropene                | ND     | 0.72 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Hexachlorobutadiene                | ND     | 0.72 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 2-Hexanone                         | ND     | 3.6  |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Isopropylbenzene                   | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 4-Isopropyltoluene                 | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 4-Methyl-2-pentanone               | ND     | 3.6  |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Methylene chloride                 | ND     | 1.1  |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| n-Butylbenzene                     | ND     | 1.1  |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| n-Propylbenzene                    | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| sec-Butylbenzene                   | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| Styrene                            | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| tert-Butylbenzene                  | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.36 |      | mg/Kg-dry | 10                  | 9/30/2014 10:38:21 PM | 15512 |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (6-8')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 5:00:00 PM

**Lab ID:** 1409C40-008

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed         | Batch               |
|------------------------------------|--------|--------|------|-----------|----|-----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                       | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.36   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| Tetrachloroethene (PCE)            | ND     | 0.36   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| trans-1,2-DCE                      | ND     | 0.36   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| trans-1,3-Dichloropropene          | ND     | 0.36   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| 1,2,3-Trichlorobenzene             | ND     | 0.72   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| 1,2,4-Trichlorobenzene             | ND     | 0.36   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| 1,1,1-Trichloroethane              | ND     | 0.36   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| 1,1,2-Trichloroethane              | ND     | 0.36   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| Trichloroethene (TCE)              | ND     | 0.36   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| Trichlorofluoromethane             | ND     | 0.36   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| 1,2,3-Trichloropropane             | ND     | 0.72   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| Vinyl chloride                     | ND     | 0.36   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| Xylenes, Total                     | ND     | 0.72   |      | mg/Kg-dry | 10 | 9/30/2014 10:38:21 PM | 15512               |
| Surr: Dibromofluoromethane         | 74.1   | 70-130 |      | %REC      | 10 | 9/30/2014 10:38:21 PM | 15512               |
| Surr: 1,2-Dichloroethane-d4        | 80.0   | 70-130 |      | %REC      | 10 | 9/30/2014 10:38:21 PM | 15512               |
| Surr: Toluene-d8                   | 92.9   | 70-130 |      | %REC      | 10 | 9/30/2014 10:38:21 PM | 15512               |
| Surr: 4-Bromofluorobenzene         | 104    | 70-130 |      | %REC      | 10 | 9/30/2014 10:38:21 PM | 15512               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 6:00:00 PM

**Lab ID:** 1409C40-009

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 10       |      | mg/Kg-dry | 1  | 9/26/2014 8:43:33 PM  | 15513                |
| Motor Oil Range Organics (MRO)                 | ND     | 51       |      | mg/Kg-dry | 1  | 9/26/2014 8:43:33 PM  | 15513                |
| Surr: DNOP                                     | 99.8   | 57.9-140 |      | %REC      | 1  | 9/26/2014 8:43:33 PM  | 15513                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 4.9      |      | mg/Kg-dry | 1  | 9/26/2014 9:13:29 PM  | 15512                |
| Surr: BFB                                      | 89.4   | 80-120   |      | %REC      | 1  | 9/26/2014 9:13:29 PM  | 15512                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 2.2    | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.033    |      | mg/Kg-dry | 1  | 10/7/2014 1:07:17 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:31:13 PM  | 15639                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:31:13 PM  | 15639                |
| Barium                                         | 180    | 0.10     |      | mg/Kg-dry | 1  | 10/3/2014 12:33:45 PM | 15639                |
| Beryllium                                      | 0.16   | 0.15     |      | mg/Kg-dry | 1  | 10/2/2014 1:31:13 PM  | 15639                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/2/2014 1:31:13 PM  | 15639                |
| Chromium                                       | 4.4    | 0.30     |      | mg/Kg-dry | 1  | 10/2/2014 1:31:13 PM  | 15639                |
| Cobalt                                         | 3.0    | 0.30     |      | mg/Kg-dry | 1  | 10/2/2014 1:31:13 PM  | 15639                |
| Lead                                           | 1.5    | 0.25     |      | mg/Kg-dry | 1  | 10/2/2014 1:31:13 PM  | 15639                |
| Nickel                                         | 2.4    | 0.50     |      | mg/Kg-dry | 1  | 10/2/2014 1:31:13 PM  | 15639                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:31:13 PM  | 15639                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/2/2014 1:31:13 PM  | 15639                |
| Vanadium                                       | 19     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:31:13 PM  | 15639                |
| Zinc                                           | 17     | 2.5      |      | mg/Kg-dry | 1  | 10/3/2014 12:33:45 PM | 15639                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 6:00:00 PM

**Lab ID:** 1409C40-009

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Di-n-octyl phthalate                   | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 1-Methylnaphthalene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2-Methylnaphthalene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 6:00:00 PM

**Lab ID:** 1409C40-009

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Naphthalene                            | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 4-Nitroaniline                         | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Pentachlorophenol                      | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Phenanthrene                           | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Surr: 2-Fluorophenol                   | 70.2   | 21-111    |      | %REC      | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Surr: Phenol-d5                        | 78.4   | 23.1-117  |      | %REC      | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Surr: 2,4,6-Tribromophenol             | 69.4   | 22.7-88.9 |      | %REC      | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Surr: Nitrobenzene-d5                  | 78.9   | 24.5-126  |      | %REC      | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Surr: 2-Fluorobiphenyl                 | 74.8   | 21.2-129  |      | %REC      | 1  | 9/26/2014 10:13:47 PM | 15506        |
| Surr: 4-Terphenyl-d14                  | 74.5   | 39.4-107  |      | %REC      | 1  | 9/26/2014 10:13:47 PM | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                       | Analyst: RAA |
| Benzene                                | ND     | 0.049     |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Toluene                                | ND     | 0.049     |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Ethylbenzene                           | ND     | 0.049     |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.049     |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.049     |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.049     |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.049     |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.049     |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Naphthalene                            | ND     | 0.098     |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1-Methylnaphthalene                    | ND     | 0.20      |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 2-Methylnaphthalene                    | ND     | 0.20      |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Acetone                                | ND     | 0.74      |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Bromobenzene                           | ND     | 0.049     |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 6:00:00 PM

**Lab ID:** 1409C40-009

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed         | Batch        |
|------------------------------------|--------|-------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                       | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Bromoform                          | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Bromomethane                       | ND     | 0.15  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 2-Butanone                         | ND     | 0.49  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Carbon disulfide                   | ND     | 0.49  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Carbon tetrachloride               | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Chlorobenzene                      | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Chloroethane                       | ND     | 0.098 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Chloroform                         | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Chloromethane                      | ND     | 0.15  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 2-Chlorotoluene                    | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 4-Chlorotoluene                    | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| cis-1,2-DCE                        | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| cis-1,3-Dichloropropene            | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.098 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Dibromochloromethane               | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Dibromomethane                     | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,2-Dichlorobenzene                | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,3-Dichlorobenzene                | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,4-Dichlorobenzene                | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Dichlorodifluoromethane            | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,1-Dichloroethane                 | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,1-Dichloroethene                 | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,2-Dichloropropane                | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,3-Dichloropropane                | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 2,2-Dichloropropane                | ND     | 0.098 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,1-Dichloropropene                | ND     | 0.098 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Hexachlorobutadiene                | ND     | 0.098 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 2-Hexanone                         | ND     | 0.49  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Isopropylbenzene                   | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 4-Isopropyltoluene                 | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 4-Methyl-2-pentanone               | ND     | 0.49  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Methylene chloride                 | ND     | 0.15  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| n-Butylbenzene                     | ND     | 0.15  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| n-Propylbenzene                    | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| sec-Butylbenzene                   | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| Styrene                            | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| tert-Butylbenzene                  | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.049 |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-2 (22-24')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 6:00:00 PM

**Lab ID:** 1409C40-009

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed         | Batch               |
|------------------------------------|--------|--------|------|-----------|----|-----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                       | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.049  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| Tetrachloroethene (PCE)            | ND     | 0.049  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| trans-1,2-DCE                      | ND     | 0.049  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| trans-1,3-Dichloropropene          | ND     | 0.049  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| 1,2,3-Trichlorobenzene             | ND     | 0.098  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| 1,2,4-Trichlorobenzene             | ND     | 0.049  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| 1,1,1-Trichloroethane              | ND     | 0.049  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| 1,1,2-Trichloroethane              | ND     | 0.049  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| Trichloroethene (TCE)              | ND     | 0.049  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| Trichlorofluoromethane             | ND     | 0.049  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| 1,2,3-Trichloropropane             | ND     | 0.098  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| Vinyl chloride                     | ND     | 0.049  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| Xylenes, Total                     | ND     | 0.098  |      | mg/Kg-dry | 1  | 10/1/2014 12:57:47 AM | 15512               |
| Surr: Dibromofluoromethane         | 79.3   | 70-130 |      | %REC      | 1  | 10/1/2014 12:57:47 AM | 15512               |
| Surr: 1,2-Dichloroethane-d4        | 79.2   | 70-130 |      | %REC      | 1  | 10/1/2014 12:57:47 AM | 15512               |
| Surr: Toluene-d8                   | 87.3   | 70-130 |      | %REC      | 1  | 10/1/2014 12:57:47 AM | 15512               |
| Surr: 4-Bromofluorobenzene         | 89.7   | 70-130 |      | %REC      | 1  | 10/1/2014 12:57:47 AM | 15512               |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 46 of 64 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12 DUP01

**Project:** GROUP 9

**Collection Date:** 9/23/2014

**Lab ID:** 1409C40-010

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 1700   | 110      |      | mg/Kg-dry | 10 | 9/26/2014 9:05:02 PM  | 15513                |
| Motor Oil Range Organics (MRO)                 | ND     | 550      |      | mg/Kg-dry | 10 | 9/26/2014 9:05:02 PM  | 15513                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/26/2014 9:05:02 PM  | 15513                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 1500   | 72       |      | mg/Kg-dry | 20 | 9/28/2014 1:29:38 AM  | R21498               |
| Surr: BFB                                      | 657    | 80-120   | S    | %REC      | 20 | 9/28/2014 1:29:38 AM  | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 8.4    | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 10/7/2014 1:09:03 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Arsenic                                        | 3.1    | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Barium                                         | 150    | 0.11     |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Beryllium                                      | 0.37   | 0.16     |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Chromium                                       | 7.2    | 0.32     |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Cobalt                                         | 3.8    | 0.32     |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Lead                                           | 6.0    | 0.27     |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Nickel                                         | 5.3    | 0.53     |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Vanadium                                       | 21     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| Zinc                                           | 28     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:40:19 PM  | 15639                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |
| Acenaphthylene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |
| Aniline                                        | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |
| Anthracene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |
| Azobenzene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |
| Benz(a)anthracene                              | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |
| Benzo(a)pyrene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |
| Benzo(b)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |
| Benzo(k)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |
| Benzoic acid                                   | ND     | 5.4      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |
| Benzyl alcohol                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM  | 15506                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12 DUP01

**Project:** GROUP 9

**Collection Date:** 9/23/2014

**Lab ID:** 1409C40-010

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Butyl benzyl phthalate                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Carbazole                              | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 4-Chloroaniline                        | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2-Chloronaphthalene                    | ND     | 2.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2-Chlorophenol                         | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Chrysene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Di-n-butyl phthalate                   | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Di-n-octyl phthalate                   | ND     | 4.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Dibenzofuran                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.7 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Diethyl phthalate                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Dimethyl phthalate                     | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 4.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 3.3 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Fluoranthene                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Fluorene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Hexachlorobenzene                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Hexachlorobutadiene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Hexachloroethane                       | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Isophorone                             | ND     | 5.4 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 1-Methylnaphthalene                    | 8.1    | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2-Methylnaphthalene                    | 8.4    | 2.2 |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 12 DUP01

Project: GROUP 9

Collection Date: 9/23/2014

Lab ID: 1409C40-010

Matrix: SOIL

Received Date: 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 5.4       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 3+4-Methylphenol                       | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Naphthalene                            | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2-Nitroaniline                         | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 3-Nitroaniline                         | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 4-Nitroaniline                         | ND     | 4.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Nitrobenzene                           | ND     | 5.4       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2-Nitrophenol                          | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 4-Nitrophenol                          | ND     | 2.7       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Pentachlorophenol                      | ND     | 4.3       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Phenanthrene                           | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Phenol                                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Pyrene                                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Pyridine                               | ND     | 5.4       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 2.2       |      | mg/Kg-dry | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Surr: 2-Fluorophenol                   | 0      | 21-111    | S    | %REC      | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Surr: Phenol-d5                        | 0      | 23.1-117  | S    | %REC      | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Surr: 2,4,6-Tribromophenol             | 0      | 22.7-88.9 | S    | %REC      | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Surr: Nitrobenzene-d5                  | 0      | 24.5-126  | S    | %REC      | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Surr: 2-Fluorobiphenyl                 | 0      | 21.2-129  | S    | %REC      | 1  | 9/27/2014 1:57:03 AM | 15506        |
| Surr: 4-Terphenyl-d14                  | 0      | 39.4-107  | S    | %REC      | 1  | 9/27/2014 1:57:03 AM | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.72      |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Toluene                                | ND     | 0.72      |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Ethylbenzene                           | ND     | 0.72      |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.72      |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.72      |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.72      |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.72      |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.72      |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Naphthalene                            | 1.5    | 1.4       |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1-Methylnaphthalene                    | 5.4    | 2.9       |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 2-Methylnaphthalene                    | 6.2    | 2.9       |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Acetone                                | ND     | 11        |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Bromobenzene                           | ND     | 0.72      |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C40

Date Reported: 10/21/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 12 DUP01

Project: GROUP 9

Collection Date: 9/23/2014

Lab ID: 1409C40-010

Matrix: SOIL

Received Date: 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Bromoform                          | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Bromomethane                       | ND     | 2.1  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 2-Butanone                         | ND     | 7.2  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Carbon disulfide                   | ND     | 7.2  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Carbon tetrachloride               | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Chlorobenzene                      | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Chloroethane                       | ND     | 1.4  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Chloroform                         | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Chloromethane                      | ND     | 2.1  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 2-Chlorotoluene                    | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 4-Chlorotoluene                    | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| cis-1,2-DCE                        | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| cis-1,3-Dichloropropene            | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,2-Dibromo-3-chloropropane        | ND     | 1.4  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Dibromochloromethane               | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Dibromomethane                     | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,2-Dichlorobenzene                | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,3-Dichlorobenzene                | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,4-Dichlorobenzene                | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Dichlorodifluoromethane            | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,1-Dichloroethane                 | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,1-Dichloroethene                 | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,2-Dichloropropane                | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,3-Dichloropropane                | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 2,2-Dichloropropane                | ND     | 1.4  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,1-Dichloropropene                | ND     | 1.4  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Hexachlorobutadiene                | ND     | 1.4  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 2-Hexanone                         | ND     | 7.2  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Isopropylbenzene                   | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 4-Isopropyltoluene                 | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 4-Methyl-2-pentanone               | ND     | 7.2  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Methylene chloride                 | ND     | 2.1  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| n-Butylbenzene                     | ND     | 2.1  |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| n-Propylbenzene                    | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| sec-Butylbenzene                   | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| Styrene                            | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| tert-Butylbenzene                  | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.72 |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C40**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12 DUP01

**Project:** GROUP 9

**Collection Date:** 9/23/2014

**Lab ID:** 1409C40-010

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.72   |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| Tetrachloroethene (PCE)            | ND     | 0.72   |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| trans-1,2-DCE                      | ND     | 0.72   |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| trans-1,3-Dichloropropene          | ND     | 0.72   |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| 1,2,3-Trichlorobenzene             | ND     | 1.4    |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| 1,2,4-Trichlorobenzene             | ND     | 0.72   |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| 1,1,1-Trichloroethane              | ND     | 0.72   |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| 1,1,2-Trichloroethane              | ND     | 0.72   |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| Trichloroethene (TCE)              | ND     | 0.72   |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| Trichlorofluoromethane             | ND     | 0.72   |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| 1,2,3-Trichloropropane             | ND     | 1.4    |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| Vinyl chloride                     | ND     | 0.72   |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| Xylenes, Total                     | ND     | 1.4    |      | mg/Kg-dry | 20 | 10/1/2014 1:25:44 AM | 15512               |
| Surr: Dibromofluoromethane         | 86.8   | 70-130 |      | %REC      | 20 | 10/1/2014 1:25:44 AM | 15512               |
| Surr: 1,2-Dichloroethane-d4        | 95.3   | 70-130 |      | %REC      | 20 | 10/1/2014 1:25:44 AM | 15512               |
| Surr: Toluene-d8                   | 95.2   | 70-130 |      | %REC      | 20 | 10/1/2014 1:25:44 AM | 15512               |
| Surr: 4-Bromofluorobenzene         | 118    | 70-130 |      | %REC      | 20 | 10/1/2014 1:25:44 AM | 15512               |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 51 of 64 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Anatek Labs, Inc.

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

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

**Batch #:** 140926042  
**Project Name:** 1409C40

## Analytical Results Report

|                         |                                  |                        |           |                           |                    |
|-------------------------|----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140926042-001                    | <b>Sampling Date</b>   | 9/23/2014 | <b>Date/Time Received</b> | 9/26/2014 12:30 PM |
| <b>Client Sample ID</b> | 1409C40-001C / SWMU 12-3 (0-0.5) |                        |           | <b>Sampling Time</b>      | 1:25 PM            |
| <b>Matrix</b>           | Soil                             | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                  |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.236 | 10/6/2014     | CRW     | EPA 335.4 |           |
| %moisture | 2.5    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

|                         |                                  |                        |           |                           |                    |
|-------------------------|----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140926042-002                    | <b>Sampling Date</b>   | 9/23/2014 | <b>Date/Time Received</b> | 9/26/2014 12:30 PM |
| <b>Client Sample ID</b> | 1409C40-002C / SWMU 12-3 (0.5-2) |                        |           | <b>Sampling Time</b>      | 1:35 PM            |
| <b>Matrix</b>           | Soil                             | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                  |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.247 | 10/6/2014     | CRW     | EPA 335.4 |           |
| %moisture | 7.2    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

|                         |                                |                        |           |                           |                    |
|-------------------------|--------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140926042-003                  | <b>Sampling Date</b>   | 9/23/2014 | <b>Date/Time Received</b> | 9/26/2014 12:30 PM |
| <b>Client Sample ID</b> | 1409C40-003B / SWMU 12-3 (2-4) |                        |           | <b>Sampling Time</b>      | 1:50 PM            |
| <b>Matrix</b>           | Soil                           | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                |                        |           |                           |                    |

| Parameter | Result | Units   | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.23 | 10/6/2014     | CRW     | EPA 335.4 |           |
| %moisture | 6      | Percent |      | 9/30/2014     | KJS     | %moisture |           |

|                         |                                  |                        |           |                           |                    |
|-------------------------|----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140926042-004                    | <b>Sampling Date</b>   | 9/23/2014 | <b>Date/Time Received</b> | 9/26/2014 12:30 PM |
| <b>Client Sample ID</b> | 1409C40-004C / SWMU 12-3 (22-24) |                        |           | <b>Sampling Time</b>      | 2:00 PM            |
| <b>Matrix</b>           | Soil                             | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                  |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.242 | 10/6/2014     | CRW     | EPA 335.4 |           |
| %moisture | 3.7    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871089

# Anatek Labs, Inc.

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

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

**Batch #:** 140926042  
**Project Name:** 1409C40

## Analytical Results Report

|                  |                                  |                 |           |                    |           |           |           |
|------------------|----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140926042-005                    | Sampling Date   | 9/23/2014 | Date/Time Received | 9/26/2014 | 12:30 PM  |           |
| Client Sample ID | 1409C40-005B / SWMU 12-3 (26-28) |                 |           | Sampling Time      | 2:05 PM   |           |           |
| Matrix           | Soil                             | Sample Location |           |                    |           |           |           |
| Comments         |                                  |                 |           |                    |           |           |           |
| Parameter        | Result                           | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                               | mg/Kg           | 0.241     | 10/6/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 4.3                              | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

|                  |                                  |                 |           |                    |           |           |           |
|------------------|----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140926042-006                    | Sampling Date   | 9/23/2014 | Date/Time Received | 9/26/2014 | 12:30 PM  |           |
| Client Sample ID | 1409C40-006C / SWMU 12-2 (0-0.5) |                 |           | Sampling Time      | 4:40 PM   |           |           |
| Matrix           | Soil                             | Sample Location |           |                    |           |           |           |
| Comments         |                                  |                 |           |                    |           |           |           |
| Parameter        | Result                           | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                               | mg/Kg           | 0.246     | 10/6/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 7.6                              | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

|                  |                                  |                 |           |                    |           |           |           |
|------------------|----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140926042-007                    | Sampling Date   | 9/23/2014 | Date/Time Received | 9/26/2014 | 12:30 PM  |           |
| Client Sample ID | 1409C40-007C / SWMU 12-2 (0.5-2) |                 |           | Sampling Time      | 4:50 PM   |           |           |
| Matrix           | Soil                             | Sample Location |           |                    |           |           |           |
| Comments         |                                  |                 |           |                    |           |           |           |
| Parameter        | Result                           | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                               | mg/Kg           | 0.239     | 10/6/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 7.1                              | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

|                  |                                |                 |           |                    |           |           |           |
|------------------|--------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140926042-008                  | Sampling Date   | 9/23/2014 | Date/Time Received | 9/26/2014 | 12:30 PM  |           |
| Client Sample ID | 1409C40-008C / SWMU 12-2 (6-8) |                 |           | Sampling Time      | 5:00 PM   |           |           |
| Matrix           | Soil                           | Sample Location |           |                    |           |           |           |
| Comments         |                                |                 |           |                    |           |           |           |
| Parameter        | Result                         | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                             | mg/Kg           | 0.257     | 10/6/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 10.3                           | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

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

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

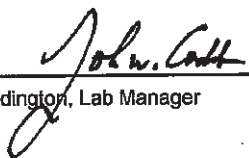
**Batch #:** 140926042  
**Project Name:** 1409C40

## Analytical Results Report

|                  |                                  |                 |           |                    |                    |           |           |
|------------------|----------------------------------|-----------------|-----------|--------------------|--------------------|-----------|-----------|
| Sample Number    | 140926042-009                    | Sampling Date   | 9/23/2014 | Date/Time Received | 9/26/2014 12:30 PM |           |           |
| Client Sample ID | 1409C40-009B / SWMU 12-2 (22-24) |                 |           | Sampling Time      | 6:00 PM            |           |           |
| Matrix           | Soil                             | Sample Location |           |                    |                    |           |           |
| Comments         |                                  |                 |           |                    |                    |           |           |
|                  |                                  |                 |           |                    |                    |           |           |
| Parameter        | Result                           | Units           | PQL       | Analysis Date      | Analyst            | Method    | Qualifier |
| Cyanide          | ND                               | mg/Kg           | 0.221     | 10/6/2014          | CRW                | EPA 335.4 |           |
| %moisture        | 2                                | Percent         |           | 9/30/2014          | KJS                | %moisture |           |

|                  |                              |                 |           |                    |                    |           |           |
|------------------|------------------------------|-----------------|-----------|--------------------|--------------------|-----------|-----------|
| Sample Number    | 140926042-010                | Sampling Date   | 9/23/2014 | Date/Time Received | 9/26/2014 12:30 PM |           |           |
| Client Sample ID | 1409C40-010C / SWMU 12 DUP01 |                 |           | Sampling Time      |                    |           |           |
| Matrix           | Soil                         | Sample Location |           |                    |                    |           |           |
| Comments         |                              |                 |           |                    |                    |           |           |
|                  |                              |                 |           |                    |                    |           |           |
| Parameter        | Result                       | Units           | PQL       | Analysis Date      | Analyst            | Method    | Qualifier |
| Cyanide          | ND                           | mg/Kg           | 0.25      | 10/6/2014          | CRW                | EPA 335.4 |           |
| %moisture        | 6.4                          | Percent         |           | 9/30/2014          | KJS                | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

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

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

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

Tuesday, October 14, 2014

Page 3 of 3



# Anatek Labs, Inc.

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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB

**Batch #:** 140926042

**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109

**Project Name:** 1409C40

**Attn:** ANDY FREEMAN

## Analytical Results Report

### Quality Control Data

#### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|---------|-----------|---------------|
| Cyanide   | 0.468      | mg/kg | 0.5       | 93.6 | 90-110  | 10/6/2014 | 10/6/2014     |

#### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|-------|---------|-----------|---------------|
| 140930028-001 | Cyanide   | ND            | 12.8      | mg/kg | 12.5     | 102.4 | 90-110  | 10/6/2014 | 10/6/2014     |

#### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 12.3       | mg/kg | 12.5      | 98.4 | 4.0  | 0-25    | 10/6/2014 | 10/6/2014     |

#### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/6/2014 | 10/6/2014     |

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

#### Comments:

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

Tuesday, October 14, 2014

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |     |                          |             |                                                   |          |              |      |          |      |
|--------------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | MB-15513  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                     | PBS       |     | Batch ID: 15513          |             | RunNo: 21477                                      |          |              |      |          |      |
| Prep Date:                     | 9/25/2014 |     | Analysis Date: 9/26/2014 |             | SeqNo: 629285                                     |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10  |                          |             |                                                   |          |              |      |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50  |                          |             |                                                   |          |              |      |          |      |
| Surr: DNOP                     | 10        |     | 10.00                    |             | 105                                               | 57.9     | 140          |      |          |      |

|                             |           |     |                          |             |                                                   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15513 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 15513          |             | RunNo: 21477                                      |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |     | Analysis Date: 9/26/2014 |             | SeqNo: 629286                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 50        | 10  | 50.00                    | 0           | 101                                               | 68.6     | 130          |      |          |      |
| Surr: DNOP                  | 5.1       |     | 5.000                    |             | 102                                               | 57.9     | 140          |      |          |      |

|                             |                    |     |                          |             |                                                   |          |                  |      |          |      |
|-----------------------------|--------------------|-----|--------------------------|-------------|---------------------------------------------------|----------|------------------|------|----------|------|
| Sample ID                   | 1409C40-001AMS     |     | SampType: MS             |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |                  |      |          |      |
| Client ID:                  | SWMU 12-3 (0-0.5') |     | Batch ID: 15513          |             | RunNo: 21477                                      |          |                  |      |          |      |
| Prep Date:                  | 9/25/2014          |     | Analysis Date: 9/26/2014 |             | SeqNo: 629298                                     |          | Units: mg/Kg-dry |      |          |      |
| Analyte                     | Result             | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 94                 | 10  | 50.83                    | 71.15       | 45.2                                              | 40.1     | 152              |      |          |      |
| Surr: DNOP                  | 6.8                |     | 5.083                    |             | 135                                               | 57.9     | 140              |      |          |      |

|                             |                    |     |                |             |      |           |                                         |      |                  |      |  |
|-----------------------------|--------------------|-----|----------------|-------------|------|-----------|-----------------------------------------|------|------------------|------|--|
| Sample ID                   | 1409C40-001AMSD    |     | SampType:      | MSD         |      | TestCode: | EPA Method 8015D: Diesel Range Organics |      |                  |      |  |
| Client ID:                  | SWMU 12-3 (0-0.5') |     | Batch ID:      | 15513       |      | RunNo:    | 21477                                   |      |                  |      |  |
| Prep Date:                  | 9/25/2014          |     | Analysis Date: | 9/26/2014   |      | SeqNo:    | 629299                                  |      | Units: mg/Kg-dry |      |  |
| Analyte                     | Result             | PQL | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                               | %RPD | RPDLimit         | Qual |  |
| Diesel Range Organics (DRO) | 86                 | 10  | 51.33          | 71.15       | 29.4 | 40.1      | 152                                     | 8.75 | 32.1             | S    |  |
| Surr: DNOP                  | 4.5                |     | 5.133          |             | 87.3 | 57.9      | 140                                     | 0    | 0                |      |  |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID <b>MB-15512</b>     | SampType: <b>MBLK</b>           |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|-------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>15512</b>          |     | RunNo: <b>21485</b>                               |             |                     |          |           |      |          |      |
| Prep Date: <b>9/25/2014</b>   | Analysis Date: <b>9/26/2014</b> |     | SeqNo: <b>628732</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |                                                   |             |                     |          |           |      |          |      |
| Surr: BFB                     | 880                             |     | 1000                                              |             | 87.5                | 80       | 120       |      |          |      |

| Sample ID <b>LCS-15512</b>    | SampType: <b>LCS</b>            |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|-------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>        | Batch ID: <b>15512</b>          |     | RunNo: <b>21485</b>                               |             |                     |          |           |      |          |      |
| Prep Date: <b>9/25/2014</b>   | Analysis Date: <b>9/26/2014</b> |     | SeqNo: <b>628733</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 27                              | 5.0 | 25.00                                             | 0           | 106                 | 65.8     | 139       |      |          |      |
| Surr: BFB                     | 970                             |     | 1000                                              |             | 96.6                | 80       | 120       |      |          |      |

| Sample ID <b>1409C40-003AMS</b>    | SampType: <b>MS</b>             |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                         |          |           |      |          |      |
|------------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|-------------------------|----------|-----------|------|----------|------|
| Client ID: <b>SWMU 12-3 (2-4')</b> | Batch ID: <b>15512</b>          |     | RunNo: <b>21485</b>                               |             |                         |          |           |      |          |      |
| Prep Date: <b>9/25/2014</b>        | Analysis Date: <b>9/26/2014</b> |     | SeqNo: <b>628735</b>                              |             | Units: <b>mg/Kg-dry</b> |          |           |      |          |      |
| Analyte                            | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                    | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)      | 95                              | 10  | 25.64                                             | 87.62       | 28.7                    | 71.8     | 132       |      |          | S    |
| Surr: BFB                          | 5000                            |     | 2051                                              |             | 242                     | 80       | 120       |      |          | S    |

| Sample ID <b>1409C40-003AMSD</b>   | SampType: <b>MSD</b>            |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                         |          |           |      |          |      |
|------------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|-------------------------|----------|-----------|------|----------|------|
| Client ID: <b>SWMU 12-3 (2-4')</b> | Batch ID: <b>15512</b>          |     | RunNo: <b>21485</b>                               |             |                         |          |           |      |          |      |
| Prep Date: <b>9/25/2014</b>        | Analysis Date: <b>9/26/2014</b> |     | SeqNo: <b>628736</b>                              |             | Units: <b>mg/Kg-dry</b> |          |           |      |          |      |
| Analyte                            | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                    | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)      | 100                             | 10  | 25.61                                             | 87.62       | 55.6                    | 71.8     | 132       | 6.99 | 20       | S    |
| Surr: BFB                          | 5300                            |     | 2049                                              |             | 257                     | 80       | 120       | 0    | 0        | S    |

| Sample ID <b>5ML RB</b>       | SampType: <b>MBLK</b>           |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|-------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21498</b>         |     | RunNo: <b>21498</b>                               |             |                     |          |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/27/2014</b> |     | SeqNo: <b>628838</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |                                                   |             |                     |          |           |      |          |      |
| Surr: BFB                     | 870                             |     | 1000                                              |             | 86.8                | 80       | 120       |      |          |      |

| Sample ID <b>2.5UG GRO LCS</b> | SampType: <b>LCS</b>            |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|--------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>         | Batch ID: <b>R21498</b>         |     | RunNo: <b>21498</b>                               |             |                     |          |           |      |          |      |
| Prep Date:                     | Analysis Date: <b>9/27/2014</b> |     | SeqNo: <b>628839</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                        | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                               |               |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|---------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS          |     | Batch ID: R21498         |             | RunNo: 21498                               |          |              |      |          |      |
| Prep Date:                    |               |     | Analysis Date: 9/27/2014 |             | SeqNo: 628839                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result        | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24            | 5.0 | 25.00                    | 0           | 96.5                                       | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 960           |     | 1000                     |             | 96.3                                       | 80       | 120          |      |          |      |

|                               |             |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|-------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | MB-15551 MK |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | PBS         |     | Batch ID: R21502         |             | RunNo: 21502                               |          |              |      |          |      |
| Prep Date:                    |             |     | Analysis Date: 9/28/2014 |             | SeqNo: 628939                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result      | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND          | 5.0 |                          |             |                                            |          |              |      |          |      |
| Surr: BFB                     | 900         |     | 1000                     |             | 89.7                                       | 80       | 120          |      |          |      |

|                               |              |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|--------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | LCS-15551 MK |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS         |     | Batch ID: R21502         |             | RunNo: 21502                               |          |              |      |          |      |
| Prep Date:                    |              |     | Analysis Date: 9/28/2014 |             | SeqNo: 628940                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result       | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26           | 5.0 | 25.00                    | 0           | 105                                        | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 940          |     | 1000                     |             | 94.5                                       | 80       | 120          |      |          |      |

|                               |        |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|--------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 5ML RB |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | PBS    |     | Batch ID: R21524         |             | RunNo: 21524                               |          |              |      |          |      |
| Prep Date:                    |        |     | Analysis Date: 9/29/2014 |             | SeqNo: 629693                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND     | 5.0 |                          |             |                                            |          |              |      |          |      |
| Surr: BFB                     | 880    |     | 1000                     |             | 87.7                                       | 80       | 120          |      |          |      |

|                               |               |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|---------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS          |     | Batch ID: R21524         |             | RunNo: 21524                               |          |              |      |          |      |
| Prep Date:                    |               |     | Analysis Date: 9/29/2014 |             | SeqNo: 629694                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result        | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 27            | 5.0 | 25.00                    | 0           | 107                                        | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 960           |     | 1000                     |             | 96.1                                       | 80       | 120          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |       |                |             |      |           |                             |      |              |      |
|--------------------------------|-----------|-------|----------------|-------------|------|-----------|-----------------------------|------|--------------|------|
| Sample ID                      | mb-15512  |       | SampType:      | MBLK        |      | TestCode: | EPA Method 8260B: Volatiles |      |              |      |
| Client ID:                     | PBS       |       | Batch ID:      | 15512       |      | RunNo:    | 21567                       |      |              |      |
| Prep Date:                     | 9/25/2014 |       | Analysis Date: | 9/30/2014   |      | SeqNo:    | 631960                      |      | Units: mg/Kg |      |
| Analyte                        | Result    | PQL   | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                   | %RPD | RPDLimit     | Qual |
| Benzene                        | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Toluene                        | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Ethylbenzene                   | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Naphthalene                    | ND        | 0.10  |                |             |      |           |                             |      |              |      |
| 1-Methylnaphthalene            | ND        | 0.20  |                |             |      |           |                             |      |              |      |
| 2-Methylnaphthalene            | ND        | 0.20  |                |             |      |           |                             |      |              |      |
| Acetone                        | ND        | 0.75  |                |             |      |           |                             |      |              |      |
| Bromobenzene                   | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Bromodichloromethane           | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Bromoform                      | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Bromomethane                   | ND        | 0.15  |                |             |      |           |                             |      |              |      |
| 2-Butanone                     | ND        | 0.50  |                |             |      |           |                             |      |              |      |
| Carbon disulfide               | ND        | 0.50  |                |             |      |           |                             |      |              |      |
| Carbon tetrachloride           | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Chlorobenzene                  | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Chloroethane                   | ND        | 0.10  |                |             |      |           |                             |      |              |      |
| Chloroform                     | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Chloromethane                  | ND        | 0.15  |                |             |      |           |                             |      |              |      |
| 2-Chlorotoluene                | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 4-Chlorotoluene                | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| cis-1,2-DCE                    | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| cis-1,3-Dichloropropene        | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.10  |                |             |      |           |                             |      |              |      |
| Dibromochloromethane           | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Dibromomethane                 | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2-Dichlorobenzene            | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,3-Dichlorobenzene            | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,4-Dichlorobenzene            | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| Dichlorodifluoromethane        | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,1-Dichloroethane             | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,1-Dichloroethene             | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,2-Dichloropropane            | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 1,3-Dichloropropane            | ND        | 0.050 |                |             |      |           |                             |      |              |      |
| 2,2-Dichloropropane            | ND        | 0.10  |                |             |      |           |                             |      |              |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |       |                |                  |      |           |                                    |      |                     |      |
|-----------------------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID                   | <b>mb-15512</b>  |       | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:                  | <b>PBS</b>       |       | Batch ID:      | <b>15512</b>     |      | RunNo:    | <b>21567</b>                       |      |                     |      |
| Prep Date:                  | <b>9/25/2014</b> |       | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>631960</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| 1,1-Dichloropropene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 2-Hexanone                  | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Isopropylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Methylene chloride          | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Butylbenzene              | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Propylbenzene             | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| sec-Butylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Styrene                     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| tert-Butylbenzene           | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,2-DCE               | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Vinyl chloride              | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Xylenes, Total              | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.39             |       | 0.5000         |                  | 77.1 | 70        | 130                                |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.40             |       | 0.5000         |                  | 79.3 | 70        | 130                                |      |                     |      |
| Surr: Toluene-d8            | 0.45             |       | 0.5000         |                  | 90.2 | 70        | 130                                |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.42             |       | 0.5000         |                  | 84.2 | 70        | 130                                |      |                     |      |

|               |                  |       |                |                  |      |           |                                    |      |                     |      |
|---------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID     | <b>ics-15512</b> |       | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:    | <b>LCSS</b>      |       | Batch ID:      | <b>15512</b>     |      | RunNo:    | <b>21567</b>                       |      |                     |      |
| Prep Date:    | <b>9/25/2014</b> |       | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>631961</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| Benzene       | 1.0              | 0.050 | 1.000          | 0                | 99.7 | 70        | 130                                |      |                     |      |
| Toluene       | 1.0              | 0.050 | 1.000          | 0                | 101  | 70        | 130                                |      |                     |      |
| Chlorobenzene | 0.99             | 0.050 | 1.000          | 0                | 99.2 | 70        | 130                                |      |                     |      |

### Qualifiers:

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                             |           |       |                          |             |                                       |          |              |      |          |      |
|-----------------------------|-----------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | lcs-15512 |       | SampType: LCS            |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                  | LCSS      |       | Batch ID: 15512          |             | RunNo: 21567                          |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |       | Analysis Date: 9/30/2014 |             | SeqNo: 631961                         |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL   | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 1.0       | 0.050 | 1.000                    | 0           | 101                                   | 60.5     | 160          |      |          |      |
| Trichloroethene (TCE)       | 0.95      | 0.050 | 1.000                    | 0           | 94.7                                  | 58.8     | 139          |      |          |      |
| Surr: Dibromofluoromethane  | 0.38      |       | 0.5000                   |             | 76.6                                  | 70       | 130          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.39      |       | 0.5000                   |             | 78.9                                  | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.46      |       | 0.5000                   |             | 92.2                                  | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.42      |       | 0.5000                   |             | 84.6                                  | 70       | 130          |      |          |      |

|                             |                    |      |                          |             |                                       |          |                  |      |          |      |
|-----------------------------|--------------------|------|--------------------------|-------------|---------------------------------------|----------|------------------|------|----------|------|
| Sample ID                   | 1409c40-005ams     |      | SampType: MS             |             | TestCode: EPA Method 8260B: Volatiles |          |                  |      |          |      |
| Client ID:                  | SWMU 12-3 (26-28') |      | Batch ID: 15512          |             | RunNo: 21567                          |          |                  |      |          |      |
| Prep Date:                  | 9/25/2014          |      | Analysis Date: 9/30/2014 |             | SeqNo: 631967                         |          | Units: mg/Kg-dry |      |          |      |
| Analyte                     | Result             | PQL  | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Benzene                     | 0.81               | 0.25 | 1.004                    | 0           | 80.6                                  | 32.2     | 145              |      |          |      |
| Toluene                     | 0.85               | 0.25 | 1.004                    | 0.07606     | 77.1                                  | 29.1     | 139              |      |          |      |
| Chlorobenzene               | 0.81               | 0.25 | 1.004                    | 0           | 80.7                                  | 32.4     | 142              |      |          |      |
| 1,1-Dichloroethene          | 0.78               | 0.25 | 1.004                    | 0           | 77.6                                  | 32.6     | 155              |      |          |      |
| Trichloroethene (TCE)       | 0.80               | 0.25 | 1.004                    | 0           | 80.1                                  | 29.2     | 150              |      |          |      |
| Surr: Dibromofluoromethane  | 2.1                |      | 2.511                    |             | 83.6                                  | 70       | 130              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 2.3                |      | 2.511                    |             | 90.1                                  | 70       | 130              |      |          |      |
| Surr: Toluene-d8            | 2.3                |      | 2.511                    |             | 91.2                                  | 70       | 130              |      |          |      |
| Surr: 4-Bromofluorobenzene  | 2.5                |      | 2.511                    |             | 99.8                                  | 70       | 130              |      |          |      |

|                             |                    |      |                          |             |                                       |          |                  |      |          |      |
|-----------------------------|--------------------|------|--------------------------|-------------|---------------------------------------|----------|------------------|------|----------|------|
| Sample ID                   | 1409c40-005amsd    |      | SampType: MSD            |             | TestCode: EPA Method 8260B: Volatiles |          |                  |      |          |      |
| Client ID:                  | SWMU 12-3 (26-28') |      | Batch ID: 15512          |             | RunNo: 21567                          |          |                  |      |          |      |
| Prep Date:                  | 9/25/2014          |      | Analysis Date: 9/30/2014 |             | SeqNo: 631968                         |          | Units: mg/Kg-dry |      |          |      |
| Analyte                     | Result             | PQL  | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Benzene                     | 0.96               | 0.25 | 1.004                    | 0           | 95.4                                  | 32.2     | 145              | 16.8 | 20       | R    |
| Toluene                     | 0.99               | 0.25 | 1.004                    | 0.07606     | 91.4                                  | 29.1     | 139              | 15.6 | 20       |      |
| Chlorobenzene               | 1.0                | 0.25 | 1.004                    | 0           | 103                                   | 32.4     | 142              | 24.1 | 20       |      |
| 1,1-Dichloroethene          | 0.93               | 0.25 | 1.004                    | 0           | 92.9                                  | 32.6     | 155              | 18.0 | 20       |      |
| Trichloroethene (TCE)       | 0.90               | 0.25 | 1.004                    | 0           | 89.7                                  | 29.2     | 150              | 11.2 | 20       |      |
| Surr: Dibromofluoromethane  | 1.9                |      | 2.511                    |             | 77.2                                  | 70       | 130              | 0    | 0        |      |
| Surr: 1,2-Dichloroethane-d4 | 2.1                |      | 2.511                    |             | 84.0                                  | 70       | 130              | 0    | 0        |      |
| Surr: Toluene-d8            | 2.3                |      | 2.511                    |             | 91.8                                  | 70       | 130              | 0    | 0        |      |
| Surr: 4-Bromofluorobenzene  | 2.3                |      | 2.511                    |             | 91.8                                  | 70       | 130              | 0    | 0        |      |

### Qualifiers:

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- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15506  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15506          |             | RunNo: 21494                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |      | Analysis Date: 9/26/2014 |             | SeqNo: 628613                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |                                           |          |              |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15506  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 15506     | RunNo:      | 21494                           |          |           |      |          |      |
| Prep Date:                 | 9/25/2014 | Analysis Date: | 9/26/2014 | SeqNo:      | 628613                          | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 2.4       |                | 3.330     |             | 72.5                            | 21       | 111       |      |          |      |
| Surr: Phenol-d5            | 2.6       |                | 3.330     |             | 76.9                            | 23.1     | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.5       |                | 3.330     |             | 44.2                            | 22.7     | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5      | 1.4       |                | 1.670     |             | 82.6                            | 24.5     | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |                | 1.670     |             | 76.5                            | 21.2     | 129       |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |                | 1.670     |             | 76.9                            | 39.4     | 107       |      |          |      |

### Qualifiers:

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O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | lcs-15506 |      | SampType: LCS            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15506          |             |      | RunNo: 21494                              |           |              |          |      |
| Prep Date:                 | 9/25/2014 |      | Analysis Date: 9/26/2014 |             |      | SeqNo: 628614                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Acenaphthene               | 1.2       | 0.20 | 1.670                    | 0           | 71.0 | 50.7                                      | 110       |              |          |      |
| 4-Chloro-3-methylphenol    | 3.0       | 0.50 | 3.330                    | 0           | 88.7 | 47.8                                      | 107       |              |          |      |
| 2-Chlorophenol             | 2.9       | 0.20 | 3.330                    | 0           | 85.6 | 45.7                                      | 108       |              |          |      |
| 1,4-Dichlorobenzene        | 1.3       | 0.20 | 1.670                    | 0           | 78.5 | 46.1                                      | 112       |              |          |      |
| 2,4-Dinitrotoluene         | 1.2       | 0.50 | 1.670                    | 0           | 69.9 | 44.9                                      | 114       |              |          |      |
| N-Nitrosodi-n-propylamine  | 1.3       | 0.20 | 1.670                    | 0           | 78.0 | 38.7                                      | 128       |              |          |      |
| 4-Nitrophenol              | 2.7       | 0.25 | 3.330                    | 0           | 79.7 | 40.2                                      | 103       |              |          |      |
| Pentachlorophenol          | 2.1       | 0.40 | 3.330                    | 0           | 64.6 | 32.9                                      | 94        |              |          |      |
| Phenol                     | 3.0       | 0.20 | 3.330                    | 0           | 90.0 | 44.1                                      | 109       |              |          |      |
| Pyrene                     | 1.3       | 0.20 | 1.670                    | 0           | 78.6 | 51.9                                      | 109       |              |          |      |
| 1,2,4-Trichlorobenzene     | 1.3       | 0.20 | 1.670                    | 0           | 80.4 | 49.5                                      | 115       |              |          |      |
| Surr: 2-Fluorophenol       | 2.5       |      | 3.330                    |             | 75.3 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.8       |      | 3.330                    |             | 85.0 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.5       |      | 3.330                    |             | 76.5 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |      | 1.670                    |             | 78.5 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 75.2 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |      | 1.670                    |             | 76.8 | 39.4                                      | 107       |              |          |      |

### Qualifiers:

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | MB-15734  |       | SampType: MBLK           |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | PBS       |       | Batch ID: 15734          |             | RunNo: 21721                       |          |              |      |          |      |
| Prep Date: | 10/6/2014 |       | Analysis Date: 10/7/2014 |             | SeqNo: 637705                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercurv    | ND        | 0.033 |                          |             |                                    |          |              |      |          |      |

|            |           |       |           |                |           |          |           |                          |          |        |       |
|------------|-----------|-------|-----------|----------------|-----------|----------|-----------|--------------------------|----------|--------|-------|
| Sample ID  | LCS-15734 |       |           | SampType:      | LCS       |          | TestCode: | EPA Method 7471: Mercury |          |        |       |
| Client ID: | LCSS      |       |           | Batch ID:      | 15734     |          | RunNo:    | 21721                    |          |        |       |
| Prep Date: | 10/6/2014 |       |           | Analysis Date: | 10/7/2014 |          | SeqNo:    | 637706                   |          | Units: | mg/Kg |
| Analyte    | Result    | PQL   | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD                     | RPDLimit | Qual   |       |
| Mercury    | 0.17      | 0.033 | 0.1667    | 0              | 105       | 80       | 120       |                          |          |        |       |

|            |                    |       |                          |             |                                    |          |                  |      |          |      |
|------------|--------------------|-------|--------------------------|-------------|------------------------------------|----------|------------------|------|----------|------|
| Sample ID  | 1409C40-001BMS     |       | SampType: MS             |             | TestCode: EPA Method 7471: Mercury |          |                  |      |          |      |
| Client ID: | SWMU 12-3 (0-0.5') |       | Batch ID: 15734          |             | RunNo: 21721                       |          |                  |      |          |      |
| Prep Date: | 10/6/2014          |       | Analysis Date: 10/7/2014 |             | SeqNo: 637732                      |          | Units: mg/Kg-dry |      |          |      |
| Analyte    | Result             | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Mercury    | 0.33               | 0.035 | 0.1778                   | 0.05041     | 159                                | 75       | 125              |      |          | S    |

|            |                    |       |                          |             |                                    |          |                  |      |          |      |
|------------|--------------------|-------|--------------------------|-------------|------------------------------------|----------|------------------|------|----------|------|
| Sample ID  | 1409C40-001BMSD    |       | SampType: MSD            |             | TestCode: EPA Method 7471: Mercury |          |                  |      |          |      |
| Client ID: | SWMU 12-3 (0-0.5') |       | Batch ID: 15734          |             | RunNo: 21721                       |          |                  |      |          |      |
| Prep Date: | 10/6/2014          |       | Analysis Date: 10/7/2014 |             | SeqNo: 637733                      |          | Units: mg/Kg-dry |      |          |      |
| Analyte    | Result             | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Mercury    | 0.23               | 0.033 | 0.1656                   | 0.05041     | 105                                | 75       | 125              | 38.8 | 20       | R    |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>MB-15639</b>  |      | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>PBS</b>       |      | Batch ID:      | <b>15639</b>     |      | RunNo:    | <b>21583</b>                         |      |                     |      |
| Prep Date: | <b>9/30/2014</b> |      | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632361</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Arsenic    | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Barium     | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Beryllium  | ND               | 0.15 |                |                  |      |           |                                      |      |                     |      |
| Cadmium    | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Chromium   | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Cobalt     | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Lead       | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Nickel     | ND               | 0.50 |                |                  |      |           |                                      |      |                     |      |
| Selenium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Silver     | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Vanadium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>LCS-15639</b> |      | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>LCSS</b>      |      | Batch ID:      | <b>15639</b>     |      | RunNo:    | <b>21583</b>                         |      |                     |      |
| Prep Date: | <b>9/30/2014</b> |      | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632362</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | 24               | 2.5  | 25.00          | 0                | 96.9 | 80        | 120                                  |      |                     |      |
| Arsenic    | 23               | 2.5  | 25.00          | 0                | 90.6 | 80        | 120                                  |      |                     |      |
| Barium     | 25               | 0.10 | 25.00          | 0                | 98.7 | 80        | 120                                  |      |                     |      |
| Beryllium  | 25               | 0.15 | 25.00          | 0                | 98.3 | 80        | 120                                  |      |                     |      |
| Cadmium    | 24               | 0.10 | 25.00          | 0                | 95.3 | 80        | 120                                  |      |                     |      |
| Chromium   | 24               | 0.30 | 25.00          | 0                | 97.4 | 80        | 120                                  |      |                     |      |
| Cobalt     | 24               | 0.30 | 25.00          | 0                | 96.4 | 80        | 120                                  |      |                     |      |
| Lead       | 24               | 0.25 | 25.00          | 0                | 94.8 | 80        | 120                                  |      |                     |      |
| Nickel     | 24               | 0.50 | 25.00          | 0                | 97.3 | 80        | 120                                  |      |                     |      |
| Selenium   | 23               | 2.5  | 25.00          | 0                | 91.7 | 80        | 120                                  |      |                     |      |
| Silver     | 4.8              | 0.25 | 5.000          | 0                | 96.8 | 80        | 120                                  |      |                     |      |
| Vanadium   | 25               | 2.5  | 25.00          | 0                | 101  | 80        | 120                                  |      |                     |      |

|            |                  |     |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|-----|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>MB-15639</b>  |     | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>PBS</b>       |     | Batch ID:      | <b>15639</b>     |      | RunNo:    | <b>21599</b>                         |      |                     |      |
| Prep Date: | <b>9/30/2014</b> |     | Analysis Date: | <b>10/2/2014</b> |      | SeqNo:    | <b>633988</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Zinc       | ND               | 2.5 |                |                  |      |           |                                      |      |                     |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|            |                  |     |           |                |                  |          |           |           |                                      |      |  |
|------------|------------------|-----|-----------|----------------|------------------|----------|-----------|-----------|--------------------------------------|------|--|
| Sample ID  | <b>LCS-15639</b> |     |           | SampType:      | <b>LCS</b>       |          |           | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |  |
| Client ID: | <b>LCSS</b>      |     |           | Batch ID:      | <b>15639</b>     |          |           | RunNo:    | <b>21599</b>                         |      |  |
| Prep Date: | <b>9/30/2014</b> |     |           | Analysis Date: | <b>10/2/2014</b> |          |           | SeqNo:    | <b>633989</b>                        |      |  |
|            |                  |     |           |                |                  |          |           | Units:    | <b>mg/Kg</b>                         |      |  |
| Analyte    | Result           | PQL | SPK value | SPK Ref Val    | %REC             | LowLimit | HighLimit | %RPD      | RPDLimit                             | Qual |  |
| Zinc       | 23               | 2.5 | 25.00     | 0              | 90.5             | 80       | 120       |           |                                      |      |  |

|            |                           |      |           |                |                  |          |           |           |                                      |      |  |
|------------|---------------------------|------|-----------|----------------|------------------|----------|-----------|-----------|--------------------------------------|------|--|
| Sample ID  | <b>1409C40-009AMS</b>     |      |           | SampType:      | <b>MS</b>        |          |           | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |  |
| Client ID: | <b>SWMU 12-2 (22-24')</b> |      |           | Batch ID:      | <b>15639</b>     |          |           | RunNo:    | <b>21599</b>                         |      |  |
| Prep Date: | <b>9/30/2014</b>          |      |           | Analysis Date: | <b>10/2/2014</b> |          |           | SeqNo:    | <b>634043</b>                        |      |  |
|            |                           |      |           |                |                  |          |           | Units:    | <b>mg/Kg-dry</b>                     |      |  |
| Analyte    | Result                    | PQL  | SPK value | SPK Ref Val    | %REC             | LowLimit | HighLimit | %RPD      | RPDLimit                             | Qual |  |
| Antimony   | 9.7                       | 2.5  | 25.39     | 0              | 38.1             | 75       | 125       |           |                                      | S    |  |
| Arsenic    | 22                        | 2.5  | 25.39     | 1.023          | 83.5             | 75       | 125       |           |                                      |      |  |
| Beryllium  | 23                        | 0.15 | 25.39     | 0.1567         | 89.6             | 75       | 125       |           |                                      |      |  |
| Cadmium    | 22                        | 0.10 | 25.39     | 0              | 85.5             | 75       | 125       |           |                                      |      |  |
| Chromium   | 27                        | 0.30 | 25.39     | 4.411          | 89.8             | 75       | 125       |           |                                      |      |  |
| Cobalt     | 24                        | 0.30 | 25.39     | 2.952          | 80.9             | 75       | 125       |           |                                      |      |  |
| Lead       | 22                        | 0.25 | 25.39     | 1.494          | 81.1             | 75       | 125       |           |                                      |      |  |
| Nickel     | 23                        | 0.51 | 25.39     | 2.408          | 80.3             | 75       | 125       |           |                                      |      |  |
| Selenium   | 21                        | 2.5  | 25.39     | 0              | 83.4             | 75       | 125       |           |                                      |      |  |
| Silver     | 4.3                       | 0.25 | 5.079     | 0              | 85.4             | 75       | 125       |           |                                      |      |  |
| Vanadium   | 40                        | 2.5  | 25.39     | 18.52          | 83.4             | 75       | 125       |           |                                      |      |  |

|            |                           |      |           |                |                  |          |           |           |                                      |      |  |
|------------|---------------------------|------|-----------|----------------|------------------|----------|-----------|-----------|--------------------------------------|------|--|
| Sample ID  | <b>1409C40-009AMSD</b>    |      |           | SampType:      | <b>MSD</b>       |          |           | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |  |
| Client ID: | <b>SWMU 12-2 (22-24')</b> |      |           | Batch ID:      | <b>15639</b>     |          |           | RunNo:    | <b>21599</b>                         |      |  |
| Prep Date: | <b>9/30/2014</b>          |      |           | Analysis Date: | <b>10/2/2014</b> |          |           | SeqNo:    | <b>634044</b>                        |      |  |
|            |                           |      |           |                |                  |          |           | Units:    | <b>mg/Kg-dry</b>                     |      |  |
| Analyte    | Result                    | PQL  | SPK value | SPK Ref Val    | %REC             | LowLimit | HighLimit | %RPD      | RPDLimit                             | Qual |  |
| Antimony   | 9.1                       | 2.5  | 25.24     | 0              | 35.9             | 75       | 125       | 6.41      | 20                                   | S    |  |
| Arsenic    | 22                        | 2.5  | 25.24     | 1.023          | 82.0             | 75       | 125       | 2.36      | 20                                   |      |  |
| Beryllium  | 22                        | 0.15 | 25.24     | 0.1567         | 88.0             | 75       | 125       | 2.34      | 20                                   |      |  |
| Cadmium    | 21                        | 0.10 | 25.24     | 0              | 84.3             | 75       | 125       | 2.06      | 20                                   |      |  |
| Chromium   | 29                        | 0.30 | 25.24     | 4.411          | 95.8             | 75       | 125       | 4.93      | 20                                   |      |  |
| Cobalt     | 23                        | 0.30 | 25.24     | 2.952          | 80.8             | 75       | 125       | 0.606     | 20                                   |      |  |
| Lead       | 21                        | 0.25 | 25.24     | 1.494          | 78.7             | 75       | 125       | 3.36      | 20                                   |      |  |
| Nickel     | 23                        | 0.50 | 25.24     | 2.408          | 80.2             | 75       | 125       | 0.660     | 20                                   |      |  |
| Selenium   | 20                        | 2.5  | 25.24     | 0              | 79.9             | 75       | 125       | 4.84      | 20                                   |      |  |
| Silver     | 4.3                       | 0.25 | 5.048     | 0              | 84.6             | 75       | 125       | 1.59      | 20                                   |      |  |
| Vanadium   | 41                        | 2.5  | 25.24     | 18.52          | 88.7             | 75       | 125       | 2.98      | 20                                   |      |  |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C40

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |                    |                |           |             |                               |          |           |      |          |      |  |
|------------|--------------------|----------------|-----------|-------------|-------------------------------|----------|-----------|------|----------|------|--|
| Sample ID  | 1409C40-009AMS     | SampType:      | MS        | TestCode:   | EPA Method 6010B: Soil Metals |          |           |      |          |      |  |
| Client ID: | SWMU 12-2 (22-24') | Batch ID:      | 15639     | RunNo:      | 21647                         |          |           |      |          |      |  |
| Prep Date: | 9/30/2014          | Analysis Date: | 10/3/2014 | SeqNo:      | 635323                        | Units:   | mg/Kg-dry |      |          |      |  |
| Analyte    | Result             | PQL            | SPK value | SPK Ref Val | %REC                          | LowLimit | HighLimit | %RPD | RPDLimit | Qual |  |
| Barium     | 190                | 0.10           | 25.39     | 181.2       | 32.5                          | 75       | 125       |      |          | S    |  |
| Zinc       | 36                 | 2.5            | 25.39     | 16.86       | 73.6                          | 75       | 125       |      |          | S    |  |

|            |                    |                |           |             |                               |          |           |      |          |      |  |
|------------|--------------------|----------------|-----------|-------------|-------------------------------|----------|-----------|------|----------|------|--|
| Sample ID  | 1409C40-009AMSD    | SampType:      | MSD       | TestCode:   | EPA Method 6010B: Soil Metals |          |           |      |          |      |  |
| Client ID: | SWMU 12-2 (22-24') | Batch ID:      | 15639     | RunNo:      | 21647                         |          |           |      |          |      |  |
| Prep Date: | 9/30/2014          | Analysis Date: | 10/3/2014 | SeqNo:      | 635324                        | Units:   | mg/Kg-dry |      |          |      |  |
| Analyte    | Result             | PQL            | SPK value | SPK Ref Val | %REC                          | LowLimit | HighLimit | %RPD | RPDLimit | Qual |  |
| Barium     | 250                | 0.10           | 25.24     | 181.2       | 268                           | 75       | 125       | 27.1 | 20       | RS   |  |
| Zinc       | 39                 | 2.5            | 25.24     | 16.86       | 88.2                          | 75       | 125       | 9.52 | 20       |      |  |

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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

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P Sample pH greater than 2.  
RL Reporting Detection Limit





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409C40

RcptNo: 1

Received by/date:

09/25/14

Logged By: Lindsay Mangin

9/25/2014 7:00:00 AM

Completed By: Lindsay Mangin

9/25/2014 8:19:56 AM

Reviewed By:

CS

09/25/14

### Chain of Custody

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

### Log In

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

### Special Handling (if applicable)

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

|                      |                                                                                                                                    |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Person Notified:     | Date:                                                                                                                              |
| By Whom:             | Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person |
| Regarding:           |                                                                                                                                    |
| Client Instructions: |                                                                                                                                    |

17. Additional remarks:

### 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 1.5     | Good      | Yes         |         |           |           |

# Chain-of-Custody Record

Client: WESTERN REFINING SW, INC.  
BLOOMFIELD TERMINAL  
 Mailing Address: #50 CO. RD 4990  
BLOOMFIELD, NM 87413  
 Phone #: 505-632-4166  
 email or Fax#: KELLY, ROBINSON  
@WRR.COM  
 QA/QC Package: ☒ Standard ☐ Other  
 Accreditation ☒ NELAP ☐ Other  
 EDD (Type) EXCEL

Turn-Around Time:

☒ Standard ☐ Rush  
 Project Name: Group 9  
 Project #: \_\_\_\_\_

Project Manager:

KELLY ROBINSON  
 Sampler: TRACY PAYNE  
 On Ice: ☒ Yes ☐ No  
 Sample Temperature: 1.5

Container Type and #  
 Preservative Type  
 HEAL No.  
1400040

| Date  | Time | Matrix | Sample Request ID  |
|-------|------|--------|--------------------|
| 13-14 | 1325 | SOIL   | SNMU 12-3 (0-0.5') |
|       | ↓    |        |                    |
|       | ↓    |        |                    |
| 13-15 | ↓    |        | SNMU 12-3 (0.5-2') |
|       | ↓    |        |                    |
| 13-15 | ↓    |        | SNMU 12-3 (2-4')   |
| 14-00 | ↓    |        | SNMU 12-3 (22-24') |
|       | ↓    |        |                    |
| 14-05 | ↓    |        | SNMU 12-3 (26-28') |

Date: 12/14/1915 Time: 925  
 Relinquished by: [Signature]  
 Date: 12/14/1915 Time: 0700  
 Relinquished by: [Signature]

Remarks:

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**  
 www.hallenvironmental.com  
 4901 Hawkins NE - Albuquerque, NM 87109  
 Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

|                            |                              |                             |                    |                    |                           |               |                                                                                        |                              |               |                   |                       |       |                      |
|----------------------------|------------------------------|-----------------------------|--------------------|--------------------|---------------------------|---------------|----------------------------------------------------------------------------------------|------------------------------|---------------|-------------------|-----------------------|-------|----------------------|
| BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> ) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) - | 8270 (Semi-VOA) - | METALS - SEE ATTACHED | SHEET | Air Bubbles (Y or N) |
|                            |                              | ✓                           |                    |                    |                           |               |                                                                                        |                              | ✓             |                   |                       |       |                      |
|                            |                              |                             | ✓                  |                    |                           |               |                                                                                        |                              | ✓             |                   | ✓                     |       |                      |
|                            |                              |                             |                    |                    |                           |               |                                                                                        |                              | ✓             |                   |                       |       |                      |
|                            |                              |                             | ✓                  |                    |                           |               |                                                                                        |                              | ✓             |                   | ✓                     |       |                      |
|                            |                              |                             |                    |                    |                           |               |                                                                                        |                              | ✓             |                   |                       |       |                      |
|                            |                              |                             | ✓                  |                    |                           |               |                                                                                        |                              | ✓             |                   | ✓                     |       |                      |
|                            |                              |                             |                    |                    |                           |               |                                                                                        |                              | ✓             |                   |                       |       |                      |
|                            |                              |                             | ✓                  |                    |                           |               |                                                                                        |                              | ✓             |                   | ✓                     |       |                      |
|                            |                              |                             |                    |                    |                           |               |                                                                                        |                              | ✓             |                   |                       |       |                      |
|                            |                              |                             | ✓                  |                    |                           |               |                                                                                        |                              | ✓             |                   | ✓                     |       |                      |
|                            |                              |                             |                    |                    |                           |               |                                                                                        |                              | ✓             |                   |                       |       |                      |

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.





# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                    | Analytical Method              |
|----------------------------|--------------------------------|
| Antimony                   | SW-846 method 6010/6020        |
| Arsenic                    | SW-846 method 6010/6020        |
| Barium                     | SW-846 method 6010/6020        |
| Beryllium                  | SW-846 method 6010/6020        |
| Cadmium                    | SW-846 method 6010/6020        |
| Chromium                   | SW-846 method 6010/6020        |
| <del>Chromium VI</del>     | <del>SW-846 Method 9060A</del> |
| Cobalt                     | SW-846 method 6010/6020        |
| Cyanide                    | SW-846 method 335.4/335.2 mod  |
| Lead                       | SW-846 method 6010/6020        |
| <del>Tetraethyl lead</del> | <del>SW-846 method 8270C</del> |
| Mercury                    | SW-846 method 7470/7471        |
| Nickel                     | SW-846 method 6010/6020        |
| Selenium                   | SW-846 method 6010/6020        |
| Silver                     | SW-846 method 6010/6020        |
| Vanadium                   | SW-846 method 6010/6020        |
| Zinc                       | SW-846 method 6010/6020        |



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October 21, 2014

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409C41

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/25/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



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

## Case Narrative

WO#: 1409C41  
Date: 10/21/2014

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**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

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Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C41**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (0.5-2)

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:20:00 AM

**Lab ID:** 1409C41-001

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 280    | 11       |      | mg/Kg-dry | 1  | 9/29/2014 3:32:59 PM  | 15500                |
| Motor Oil Range Organics (MRO)                 | 400    | 54       |      | mg/Kg-dry | 1  | 9/29/2014 3:32:59 PM  | 15500                |
| Surr: DNOP                                     | 112    | 57.9-140 |      | %REC      | 1  | 9/29/2014 3:32:59 PM  | 15500                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.2      |      | mg/Kg-dry | 1  | 9/28/2014 1:59:45 AM  | R21498               |
| Surr: BFB                                      | 88.6   | 80-120   |      | %REC      | 1  | 9/28/2014 1:59:45 AM  | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 8.2    | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.061  | 0.036    |      | mg/Kg-dry | 1  | 10/2/2014 1:13:42 PM  | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Arsenic                                        | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Barium                                         | 130    | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Beryllium                                      | 0.37   | 0.16     |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Chromium                                       | 5.4    | 0.32     |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Cobalt                                         | 3.7    | 0.32     |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Lead                                           | 5.3    | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Nickel                                         | 5.1    | 0.54     |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Vanadium                                       | 21     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 2:11:48 PM  | 15559                |
| Zinc                                           | 27     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:13:29 PM  | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |
| Acenaphthylene                                 | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |
| Aniline                                        | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |
| Anthracene                                     | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |
| Azobenzene                                     | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |
| Benz(a)anthracene                              | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |
| Benzo(a)pyrene                                 | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |
| Benzo(b)fluoranthene                           | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |
| Benzo(k)fluoranthene                           | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |
| Benzyl alcohol                                 | ND     | 0.44     |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM  | 15506                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C41

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (0.5-2)

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:20:00 AM

**Lab ID:** 1409C41-001

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Butyl benzyl phthalate                 | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Carbazole                              | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 2-Chloronaphthalene                    | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 2-Chlorophenol                         | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Chrysene                               | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Di-n-octyl phthalate                   | ND     | 0.87 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Dibenzofuran                           | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Diethyl phthalate                      | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Dimethyl phthalate                     | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 0.87 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 0.65 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Fluoranthene                           | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Fluorene                               | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Hexachlorobenzene                      | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Hexachlorobutadiene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Hexachloroethane                       | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 1-Methylnaphthalene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |
| 2-Methylnaphthalene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/27/2014 2:25:01 AM | 15506        |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 3 of 28 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C41

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (0.5-2)

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:20:00 AM

**Lab ID:** 1409C41-001

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result  | RL        | Qual | Units         | DF | Date Analyzed        | Batch |
|----------------------------------------|---------|-----------|------|---------------|----|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      | Analyst: JDC  |    |                      |       |
| 2-Methylphenol                         | ND      | 1.1       |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| 3+4-Methylphenol                       | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| N-Nitrosodi-n-propylamine              | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| N-Nitrosodiphenylamine                 | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Naphthalene                            | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| 2-Nitroaniline                         | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| 3-Nitroaniline                         | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| 4-Nitroaniline                         | ND      | 0.87      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Nitrobenzene                           | ND      | 1.1       |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| 2-Nitrophenol                          | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| 4-Nitrophenol                          | ND      | 0.54      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Pentachlorophenol                      | ND      | 0.87      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Phenanthrene                           | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Phenol                                 | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Pyrene                                 | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Pyridine                               | ND      | 1.1       |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| 1,2,4-Trichlorobenzene                 | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| 2,4,5-Trichlorophenol                  | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| 2,4,6-Trichlorophenol                  | ND      | 0.44      |      | mg/Kg-dry     | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Surr: 2-Fluorophenol                   | 72.9    | 21-111    |      | %REC          | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Surr: Phenol-d5                        | 79.0    | 23.1-117  |      | %REC          | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Surr: 2,4,6-Tribromophenol             | 31.5    | 22.7-88.9 |      | %REC          | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Surr: Nitrobenzene-d5                  | 86.5    | 24.5-126  |      | %REC          | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Surr: 2-Fluorobiphenyl                 | 77.8    | 21.2-129  |      | %REC          | 1  | 9/27/2014 2:25:01 AM | 15506 |
| Surr: 4-Terphenyl-d14                  | 79.6    | 39.4-107  |      | %REC          | 1  | 9/27/2014 2:25:01 AM | 15506 |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      | Analyst: cadg |    |                      |       |
| Benzene                                | ND      | 0.00188   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| Toluene                                | 0.00203 | 0.00188   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| Ethylbenzene                           | ND      | 0.00188   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| Xylenes, Total                         | 0.00940 | 0.00188   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00188   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| 1,2,4-Trimethylbenzene                 | 0.00238 | 0.00188   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00188   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00188   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00188   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| Naphthalene                            | ND      | 0.00188   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| 1-Methylnaphthalene                    | ND      | 0.00376   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| 2-Methylnaphthalene                    | ND      | 0.00376   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |
| Acetone                                | 0.0165  | 0.00939   |      | mg/Kg-dry     | 1  | 9/25/2014 7:14:49 PM | 15499 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C41

Date Reported: 10/21/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-3 (0.5-2)

Project: GROUP 9

Collection Date: 9/23/2014 10:20:00 AM

Lab ID: 1409C41-001

Matrix: SOIL

Received Date: 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Bromodichloromethane                   | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Bromoform                              | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Bromomethane                           | ND     | 0.00282 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 2-Butanone                             | ND     | 0.00939 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Carbon tetrachloride                   | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Chlorobenzene                          | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Chloroethane                           | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Chloroform                             | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Chloromethane                          | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 2-Chlorotoluene                        | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Carbon disulfide                       | ND     | 0.00939 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 4-Chlorotoluene                        | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| cis-1,2-DCE                            | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| cis-1,3-Dichloropropene                | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Dibromochloromethane                   | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Dibromomethane                         | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 1,2-Dichlorobenzene                    | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 1,3-Dichlorobenzene                    | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 1,4-Dichlorobenzene                    | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Dichlorodifluoromethane                | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 1,1-Dichloroethane                     | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 1,1-Dichloroethene                     | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 1,2-Dichloropropane                    | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 1,3-Dichloropropane                    | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 2,2-Dichloropropane                    | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 1,1-Dichloropropene                    | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Hexachlorobutadiene                    | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Isopropylbenzene                       | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 4-Isopropyltoluene                     | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Methylene chloride                     | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| n-Butylbenzene                         | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 2-Hexanone                             | ND     | 0.00939 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| n-Propylbenzene                        | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| sec-Butylbenzene                       | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| Styrene                                | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| 4-Methyl-2-pentanone                   | ND     | 0.00939 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |
| tert-Butylbenzene                      | ND     | 0.00188 |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499         |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 5 of 28 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C41**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (0.5-2)

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:20:00 AM

**Lab ID:** 1409C41-001

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| Tetrachloroethene (PCE)                | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| trans-1,2-DCE                          | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| trans-1,3-Dichloropropene              | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| 1,1,1-Trichloroethane                  | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| 1,1,2-Trichloroethane                  | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| Trichloroethene (TCE)                  | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| Trichlorofluoromethane                 | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| 1,2,3-Trichloropropane                 | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| Vinyl chloride                         | ND     | 0.00188  |      | mg/Kg-dry | 1  | 9/25/2014 7:14:49 PM | 15499                |
| Surr: 1,2-Dichloroethane-d4            | 114    | 70-130   |      | %REC      | 1  | 9/25/2014 7:14:49 PM | 15499                |
| Surr: 4-Bromofluorobenzene             | 101    | 65.3-135 |      | %REC      | 1  | 9/25/2014 7:14:49 PM | 15499                |
| Surr: Dibromofluoromethane             | 103    | 70-130   |      | %REC      | 1  | 9/25/2014 7:14:49 PM | 15499                |
| Surr: Toluene-d8                       | 100    | 70-130   |      | %REC      | 1  | 9/25/2014 7:14:49 PM | 15499                |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 28 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C41**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (4-6')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:30:00 AM

**Lab ID:** 1409C41-002

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 410    | 11       |      | mg/Kg-dry | 1  | 9/26/2014 5:58:26 PM  | 15500                |
| Motor Oil Range Organics (MRO)                 | ND     | 56       |      | mg/Kg-dry | 1  | 9/26/2014 5:58:26 PM  | 15500                |
| Surr: DNOP                                     | 99.4   | 57.9-140 |      | %REC      | 1  | 9/26/2014 5:58:26 PM  | 15500                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 1800   | 150      |      | mg/Kg-dry | 50 | 9/28/2014 2:29:52 AM  | R21498               |
| Surr: BFB                                      | 140    | 80-120   | S    | %REC      | 50 | 9/28/2014 2:29:52 AM  | R21498               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 12     | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.039    |      | mg/Kg-dry | 1  | 10/2/2014 1:15:28 PM  | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Arsenic                                        | 2.8    | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Barium                                         | 170    | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Beryllium                                      | 0.40   | 0.16     |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Chromium                                       | 11     | 0.32     |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Cobalt                                         | 4.7    | 0.32     |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Lead                                           | 20     | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Nickel                                         | 11     | 0.54     |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Vanadium                                       | 23     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 2:13:05 PM  | 15559                |
| Zinc                                           | 28     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 1:14:46 PM  | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |
| Acenaphthylene                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |
| Aniline                                        | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |
| Anthracene                                     | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |
| Azobenzene                                     | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |
| Benz(a)anthracene                              | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |
| Benzo(a)pyrene                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |
| Benzo(b)fluoranthene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |
| Benzo(k)fluoranthene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |
| Benzyl alcohol                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C41

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (4-6')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:30:00 AM

**Lab ID:** 1409C41-002

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Butyl benzyl phthalate                 | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Carbazole                              | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 2-Chloronaphthalene                    | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 2-Chlorophenol                         | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Chrysene                               | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Di-n-octyl phthalate                   | ND     | 0.91 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Dibenzofuran                           | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Diethyl phthalate                      | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Dimethyl phthalate                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 0.91 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 0.68 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Fluoranthene                           | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Fluorene                               | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Hexachlorobenzene                      | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Hexachlorobutadiene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Hexachloroethane                       | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 1-Methylnaphthalene                    | 5.7    | 0.45 |      | mg/Kg-dry | 1  | 9/26/2014 10:41:34 PM | 15506        |
| 2-Methylnaphthalene                    | 9.8    | 0.91 |      | mg/Kg-dry | 2  | 9/27/2014 1:33:34 PM  | 15506        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C41

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (4-6')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:30:00 AM

**Lab ID:** 1409C41-002

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF  | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|-----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |     |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 1.1       |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| 3+4-Methylphenol                       | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Naphthalene                            | 10     | 0.91      |      | mg/Kg-dry | 2   | 9/27/2014 1:33:34 PM  | 15506        |
| 2-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| 3-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| 4-Nitroaniline                         | ND     | 0.91      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Nitrobenzene                           | ND     | 1.1       |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| 2-Nitrophenol                          | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| 4-Nitrophenol                          | ND     | 0.57      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Pentachlorophenol                      | ND     | 0.91      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Phenanthrene                           | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Phenol                                 | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Pyrene                                 | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Pyridine                               | ND     | 1.1       |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 0.45      |      | mg/Kg-dry | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Surr: 2-Fluorophenol                   | 68.8   | 21-111    |      | %REC      | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Surr: Phenol-d5                        | 28.3   | 23.1-117  |      | %REC      | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Surr: 2,4,6-Tribromophenol             | 45.4   | 22.7-88.9 |      | %REC      | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Surr: Nitrobenzene-d5                  | 72.2   | 24.5-126  |      | %REC      | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Surr: 2-Fluorobiphenyl                 | 75.2   | 21.2-129  |      | %REC      | 1   | 9/26/2014 10:41:34 PM | 15506        |
| Surr: 4-Terphenyl-d14                  | 77.4   | 39.4-107  |      | %REC      | 1   | 9/26/2014 10:41:34 PM | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |     |                       | Analyst: RAA |
| Benzene                                | 2.2    | 1.5       |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |
| Toluene                                | 45     | 1.5       |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |
| Ethylbenzene                           | 31     | 1.5       |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |
| Methyl tert-butyl ether (MTBE)         | ND     | 1.5       |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |
| 1,2,4-Trimethylbenzene                 | 200    | 15        |      | mg/Kg-dry | 500 | 10/2/2014 12:06:10 PM | 15512        |
| 1,3,5-Trimethylbenzene                 | 67     | 1.5       |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |
| 1,2-Dichloroethane (EDC)               | ND     | 1.5       |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |
| 1,2-Dibromoethane (EDB)                | ND     | 1.5       |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |
| Naphthalene                            | 11     | 3.1       |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |
| 1-Methylnaphthalene                    | ND     | 6.2       |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |
| 2-Methylnaphthalene                    | 10     | 6.2       |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |
| Acetone                                | ND     | 23        |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |
| Bromobenzene                           | ND     | 1.5       |      | mg/Kg-dry | 50  | 10/2/2014 2:16:09 AM  | 15512        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C41**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (4-6')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:30:00 AM

**Lab ID:** 1409C41-002

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|-----|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |           |    |                      | Analyst: <b>RAA</b> |
| Bromodichloromethane               | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Bromoform                          | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Bromomethane                       | ND     | 4.6 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 2-Butanone                         | ND     | 15  |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Carbon disulfide                   | ND     | 15  |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Carbon tetrachloride               | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Chlorobenzene                      | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Chloroethane                       | ND     | 3.1 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Chloroform                         | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Chloromethane                      | ND     | 4.6 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 2-Chlorotoluene                    | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 4-Chlorotoluene                    | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| cis-1,2-DCE                        | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| cis-1,3-Dichloropropene            | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,2-Dibromo-3-chloropropane        | ND     | 3.1 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Dibromochloromethane               | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Dibromomethane                     | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,2-Dichlorobenzene                | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,3-Dichlorobenzene                | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,4-Dichlorobenzene                | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Dichlorodifluoromethane            | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,1-Dichloroethane                 | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,1-Dichloroethene                 | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,2-Dichloropropane                | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,3-Dichloropropane                | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 2,2-Dichloropropane                | ND     | 3.1 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,1-Dichloropropene                | ND     | 3.1 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Hexachlorobutadiene                | ND     | 3.1 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 2-Hexanone                         | ND     | 15  |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Isopropylbenzene                   | 3.4    | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 4-Isopropyltoluene                 | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 4-Methyl-2-pentanone               | ND     | 15  |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Methylene chloride                 | ND     | 4.6 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| n-Butylbenzene                     | 12     | 4.6 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| n-Propylbenzene                    | 25     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| sec-Butylbenzene                   | 3.8    | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Styrene                            | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| tert-Butylbenzene                  | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,1,1,2-Tetrachloroethane          | ND     | 1.5 |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C41**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (4-6')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:30:00 AM

**Lab ID:** 1409C41-002

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 1.5    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Tetrachloroethene (PCE)            | ND     | 1.5    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| trans-1,2-DCE                      | ND     | 1.5    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| trans-1,3-Dichloropropene          | ND     | 1.5    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,2,3-Trichlorobenzene             | ND     | 3.1    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,2,4-Trichlorobenzene             | ND     | 1.5    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,1,1-Trichloroethane              | ND     | 1.5    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,1,2-Trichloroethane              | ND     | 1.5    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Trichloroethene (TCE)              | ND     | 1.5    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Trichlorofluoromethane             | ND     | 1.5    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| 1,2,3-Trichloropropane             | ND     | 3.1    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Vinyl chloride                     | ND     | 1.5    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Xylenes, Total                     | 250    | 3.1    |      | mg/Kg-dry | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Surr: Dibromofluoromethane         | 87.0   | 70-130 |      | %REC      | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Surr: 1,2-Dichloroethane-d4        | 87.4   | 70-130 |      | %REC      | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Surr: Toluene-d8                   | 92.1   | 70-130 |      | %REC      | 50 | 10/2/2014 2:16:09 AM | 15512               |
| Surr: 4-Bromofluorobenzene         | 99.4   | 70-130 |      | %REC      | 50 | 10/2/2014 2:16:09 AM | 15512               |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 11 of 28 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C41**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:40:00 AM

**Lab ID:** 1409C41-003

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 1300   | 100      |      | mg/Kg-dry | 10 | 9/29/2014 4:03:17 PM  | 15500                |
| Motor Oil Range Organics (MRO)                 | ND     | 510      |      | mg/Kg-dry | 10 | 9/29/2014 4:03:17 PM  | 15500                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/29/2014 4:03:17 PM  | 15500                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 520    | 100      |      | mg/Kg-dry | 20 | 9/26/2014 9:42:02 PM  | 15512                |
| Surr: BFB                                      | 150    | 80-120   | S    | %REC      | 20 | 9/26/2014 9:42:02 PM  | 15512                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 4.3    | 1.0      |      | wt%       | 1  | 9/25/2014 12:33:00 PM | R21479               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.034    |      | mg/Kg-dry | 1  | 10/2/2014 1:17:13 PM  | 15593                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Barium                                         | 160    | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Chromium                                       | 2.5    | 0.30     |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Cobalt                                         | 3.8    | 0.30     |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Lead                                           | 2.1    | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Nickel                                         | 2.5    | 0.51     |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Vanadium                                       | 23     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 2:14:20 PM  | 15559                |
| Zinc                                           | 18     | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 1:16:01 PM  | 15559                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |
| Benzoic acid                                   | ND     | 0.54     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C41

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:40:00 AM

**Lab ID:** 1409C41-003

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 4-Chloro-3-methylphenol                | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 4-Chloroaniline                        | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 2-Chloronaphthalene                    | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Di-n-butyl phthalate                   | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Di-n-octyl phthalate                   | ND     | 0.43 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 2,4-Dichlorophenol                     | ND     | 0.43 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 2,4-Dimethylphenol                     | ND     | 0.32 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 2,4-Dinitrophenol                      | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 2,4-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 2,6-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Fluorene                               | 0.37   | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Isophorone                             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 1-Methylnaphthalene                    | 5.6    | 1.1  |      | mg/Kg-dry | 5  | 9/27/2014 2:01:41 PM  | 15506        |
| 2-Methylnaphthalene                    | 10     | 1.1  |      | mg/Kg-dry | 5  | 9/27/2014 2:01:41 PM  | 15506        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C41

Date Reported: 10/21/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-3 (26-28')

Project: GROUP 9

Collection Date: 9/23/2014 10:40:00 AM

Lab ID: 1409C41-003

Matrix: SOIL

Received Date: 9/25/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.54      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 3+4-Methylphenol                       | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| N-Nitrosodi-n-propylamine              | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| N-Nitrosodiphenylamine                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Naphthalene                            | 5.0    | 1.1       |      | mg/Kg-dry | 5  | 9/27/2014 2:01:41 PM  | 15506        |
| 2-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 3-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 4-Nitroaniline                         | ND     | 0.43      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Nitrobenzene                           | ND     | 0.54      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 2-Nitrophenol                          | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 4-Nitrophenol                          | ND     | 0.27      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Pentachlorophenol                      | ND     | 0.43      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Phenanthrene                           | 0.69   | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Phenol                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Pyrene                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Pyridine                               | ND     | 0.54      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 2,4,5-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| 2,4,6-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Surr: 2-Fluorophenol                   | 59.6   | 21-111    |      | %REC      | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Surr: Phenol-d5                        | 45.7   | 23.1-117  |      | %REC      | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Surr: 2,4,6-Tribromophenol             | 50.1   | 22.7-88.9 |      | %REC      | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Surr: Nitrobenzene-d5                  | 76.6   | 24.5-126  |      | %REC      | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Surr: 2-Fluorobiphenyl                 | 63.5   | 21.2-129  |      | %REC      | 1  | 9/26/2014 11:09:18 PM | 15506        |
| Surr: 4-Terphenyl-d14                  | 71.0   | 39.4-107  |      | %REC      | 1  | 9/26/2014 11:09:18 PM | 15506        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                       | Analyst: RAA |
| Benzene                                | ND     | 1.0       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| Toluene                                | 5.5    | 1.0       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| Ethylbenzene                           | 17     | 1.0       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| Methyl tert-butyl ether (MTBE)         | ND     | 1.0       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| 1,2,4-Trimethylbenzene                 | 51     | 1.0       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| 1,3,5-Trimethylbenzene                 | 16     | 1.0       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| 1,2-Dichloroethane (EDC)               | ND     | 1.0       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| 1,2-Dibromoethane (EDB)                | ND     | 1.0       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| Naphthalene                            | 7.9    | 2.1       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| 1-Methylnaphthalene                    | 7.2    | 4.1       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| 2-Methylnaphthalene                    | 12     | 4.1       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| Acetone                                | ND     | 15        |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |
| Bromobenzene                           | ND     | 1.0       |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM  | 15512        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409C41

Date Reported: 10/21/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:40:00 AM

**Lab ID:** 1409C41-003

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|-----|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Bromoform                          | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Bromomethane                       | ND     | 3.1 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 2-Butanone                         | ND     | 10  |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Carbon disulfide                   | ND     | 10  |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Carbon tetrachloride               | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Chlorobenzene                      | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Chloroethane                       | ND     | 2.1 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Chloroform                         | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Chloromethane                      | ND     | 3.1 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 2-Chlorotoluene                    | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 4-Chlorotoluene                    | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| cis-1,2-DCE                        | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| cis-1,3-Dichloropropene            | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 1,2-Dibromo-3-chloropropane        | ND     | 2.1 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Dibromochloromethane               | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Dibromomethane                     | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 1,2-Dichlorobenzene                | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 1,3-Dichlorobenzene                | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 1,4-Dichlorobenzene                | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Dichlorodifluoromethane            | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 1,1-Dichloroethane                 | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 1,1-Dichloroethene                 | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 1,2-Dichloropropane                | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 1,3-Dichloropropane                | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 2,2-Dichloropropane                | ND     | 2.1 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 1,1-Dichloropropene                | ND     | 2.1 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Hexachlorobutadiene                | ND     | 2.1 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 2-Hexanone                         | ND     | 10  |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Isopropylbenzene                   | 3.0    | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 4-Isopropyltoluene                 | 1.1    | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 4-Methyl-2-pentanone               | ND     | 10  |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Methylene chloride                 | ND     | 3.1 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| n-Butylbenzene                     | 4.6    | 3.1 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| n-Propylbenzene                    | 12     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| sec-Butylbenzene                   | 2.1    | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| Styrene                            | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| tert-Butylbenzene                  | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |
| 1,1,1,2-Tetrachloroethane          | ND     | 1.0 |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409C41**

Date Reported: **10/21/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-3 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/23/2014 10:40:00 AM

**Lab ID:** 1409C41-003

**Matrix:** SOIL

**Received Date:** 9/25/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 1.0    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| Tetrachloroethene (PCE)            | ND     | 1.0    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| trans-1,2-DCE                      | ND     | 1.0    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| trans-1,3-Dichloropropene          | ND     | 1.0    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| 1,2,3-Trichlorobenzene             | ND     | 2.1    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| 1,2,4-Trichlorobenzene             | ND     | 1.0    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| 1,1,1-Trichloroethane              | ND     | 1.0    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| 1,1,2-Trichloroethane              | ND     | 1.0    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| Trichloroethene (TCE)              | ND     | 1.0    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| Trichlorofluoromethane             | ND     | 1.0    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| 1,2,3-Trichloropropane             | ND     | 2.1    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| Vinyl chloride                     | ND     | 1.0    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| Xylenes, Total                     | 70     | 2.1    |      | mg/Kg-dry | 20 | 10/2/2014 2:43:57 AM | 15512               |
| Surr: Dibromofluoromethane         | 85.1   | 70-130 |      | %REC      | 20 | 10/2/2014 2:43:57 AM | 15512               |
| Surr: 1,2-Dichloroethane-d4        | 90.0   | 70-130 |      | %REC      | 20 | 10/2/2014 2:43:57 AM | 15512               |
| Surr: Toluene-d8                   | 94.1   | 70-130 |      | %REC      | 20 | 10/2/2014 2:43:57 AM | 15512               |
| Surr: 4-Bromofluorobenzene         | 101    | 70-130 |      | %REC      | 20 | 10/2/2014 2:43:57 AM | 15512               |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 16 of 28 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Anatek Labs, Inc.

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

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

**Batch #:** 140926034  
**Project Name:** 1409C41

## Analytical Results Report

|                         |                                  |                        |           |                           |                    |
|-------------------------|----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140926034-001                    | <b>Sampling Date</b>   | 9/23/2014 | <b>Date/Time Received</b> | 9/26/2014 12:30 PM |
| <b>Client Sample ID</b> | 1409C41-001C / SWMU 13-3 (0.5-2) |                        |           | <b>Sampling Time</b>      | 10:20 AM           |
| <b>Matrix</b>           | Soil                             | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                  |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.261 | 10/2/2014     | CRW     | EPA 335.4 |           |
| %moisture | 7.8    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

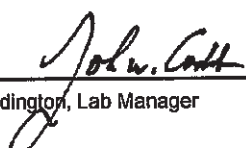
|                         |                                |                        |           |                           |                    |
|-------------------------|--------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140926034-002                  | <b>Sampling Date</b>   | 9/23/2014 | <b>Date/Time Received</b> | 9/26/2014 12:30 PM |
| <b>Client Sample ID</b> | 1409C41-002C / SWMU 13-3 (4-6) |                        |           | <b>Sampling Time</b>      | 10:30 AM           |
| <b>Matrix</b>           | Soil                           | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.262 | 10/2/2014     | CRW     | EPA 335.4 |           |
| %moisture | 13.3   | Percent |       | 9/30/2014     | KJS     | %moisture |           |

|                         |                                  |                        |           |                           |                    |
|-------------------------|----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140926034-003                    | <b>Sampling Date</b>   | 9/23/2014 | <b>Date/Time Received</b> | 9/26/2014 12:30 PM |
| <b>Client Sample ID</b> | 1409C41-003B / SWMU 13-3 (26-28) |                        |           | <b>Sampling Time</b>      | 10:40 AM           |
| <b>Matrix</b>           | Soil                             | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                  |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.249 | 10/6/2014     | CRW     | EPA 335.4 |           |
| %moisture | 3.9    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

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

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

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

Tuesday, October 14, 2014

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# Anatek Labs, Inc.

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

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

**Batch #:** 140926034  
**Project Name:** 1409C41

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|-----------|---------------|
| Cyanide   | 0.468      | mg/kg | 0.5       | 93.6  | 90-110  | 10/6/2014 | 10/6/2014     |
| Cyanide   | 0.500      | mg/kg | 0.5       | 100.0 | 90-110  | 10/2/2014 | 10/2/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|-------|---------|-----------|---------------|
| 140930028-001 | Cyanide   | ND            | 12.8      | mg/kg | 12.5     | 102.4 | 90-110  | 10/6/2014 | 10/6/2014     |
| 140925060-001 | Cyanide   | ND            | 13.1      | mg/kg | 13.1     | 100.0 | 90-110  | 10/2/2014 | 10/2/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 12.3       | mg/kg | 12.5      | 98.4 | 4.0  | 0-25    | 10/6/2014 | 10/6/2014     |
| Cyanide   | 12.9       | mg/kg | 13.1      | 98.5 | 1.5  | 0-25    | 10/2/2014 | 10/2/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/6/2014 | 10/6/2014     |
| Cyanide   | ND     | mg/Kg | 0.5 | 10/2/2014 | 10/2/2014     |

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

### Comments:

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

Tuesday, October 14, 2014

Page 1 of 1

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |                          |           |             |                                                   |          |              |      |          |      |
|--------------------------------|-----------|--------------------------|-----------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | MB-15500  | SampType: MBLK           |           |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                     | PBS       | Batch ID: 15500          |           |             | RunNo: 21436                                      |          |              |      |          |      |
| Prep Date:                     | 9/25/2014 | Analysis Date: 9/25/2014 |           |             | SeqNo: 626728                                     |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL                      | SPK value | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10                       |           |             |                                                   |          |              |      |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50                       |           |             |                                                   |          |              |      |          |      |
| Surr: DNOP                     | 9.9       |                          | 10.00     |             | 99.2                                              | 57.9     | 140          |      |          |      |

|                             |           |     |                          |             |                                                   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15500 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 15500          |             | RunNo: 21436                                      |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |     | Analysis Date: 9/25/2014 |             | SeqNo: 626795                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 57        | 10  | 50.00                    | 0           | 113                                               | 68.6     | 130          |      |          |      |
| Surr: DNOP                  | 4.8       |     | 5.000                    |             | 96.5                                              | 57.9     | 140          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                               |           |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|-----------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | MB-15512  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | PBS       |     | Batch ID: 15512          |             | RunNo: 21485                               |          |              |      |          |      |
| Prep Date:                    | 9/25/2014 |     | Analysis Date: 9/26/2014 |             | SeqNo: 628732                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result    | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND        | 5.0 |                          |             |                                            |          |              |      |          |      |
| Surr: BFB                     | 880       |     | 1000                     |             | 87.5                                       | 80       | 120          |      |          |      |

|                               |           |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|-----------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | LCS-15512 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS      |     | Batch ID: 15512          |             | RunNo: 21485                               |          |              |      |          |      |
| Prep Date:                    | 9/25/2014 |     | Analysis Date: 9/26/2014 |             | SeqNo: 628733                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result    | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 27        | 5.0 | 25.00                    | 0           | 106                                        | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 970       |     | 1000                     |             | 96.6                                       | 80       | 120          |      |          |      |

|                               |        |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|--------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 5ML RB |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | PBS    |     | Batch ID: R21498         |             | RunNo: 21498                               |          |              |      |          |      |
| Prep Date:                    |        |     | Analysis Date: 9/27/2014 |             | SeqNo: 628838                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND     | 5.0 |                          |             |                                            |          |              |      |          |      |
| Surr: BFB                     | 870    |     | 1000                     |             | 86.8                                       | 80       | 120          |      |          |      |

|                               |               |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|---------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS          |     | Batch ID: R21498         |             | RunNo: 21498                               |          |              |      |          |      |
| Prep Date:                    |               |     | Analysis Date: 9/27/2014 |             | SeqNo: 628839                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result        | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24            | 5.0 | 25.00                    | 0           | 96.5                                       | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 960           |     | 1000                     |             | 96.3                                       | 80       | 120          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |       |                          |             |                                       |          |              |      |          |      |
|--------------------------------|-----------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15512  |       | SampType: MBLK           |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                     | PBS       |       | Batch ID: 15512          |             | RunNo: 21567                          |          |              |      |          |      |
| Prep Date:                     | 9/25/2014 |       | Analysis Date: 9/30/2014 |             | SeqNo: 631960                         |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL   | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Toluene                        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Naphthalene                    | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.20  |                          |             |                                       |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.20  |                          |             |                                       |          |              |      |          |      |
| Acetone                        | ND        | 0.75  |                          |             |                                       |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Bromoform                      | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Bromomethane                   | ND        | 0.15  |                          |             |                                       |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.50  |                          |             |                                       |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.50  |                          |             |                                       |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Chloroethane                   | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |
| Chloroform                     | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Chloromethane                  | ND        | 0.15  |                          |             |                                       |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 2,2-Dichloropropane            | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |       |                |                  |      |           |                                    |      |                     |      |
|-----------------------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID                   | <b>mb-15512</b>  |       | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:                  | <b>PBS</b>       |       | Batch ID:      | <b>15512</b>     |      | RunNo:    | <b>21567</b>                       |      |                     |      |
| Prep Date:                  | <b>9/25/2014</b> |       | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>631960</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| 1,1-Dichloropropene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 2-Hexanone                  | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Isopropylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Methylene chloride          | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Butylbenzene              | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Propylbenzene             | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| sec-Butylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Styrene                     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| tert-Butylbenzene           | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,2-DCE               | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Vinyl chloride              | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Xylenes, Total              | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.39             |       | 0.5000         |                  | 77.1 | 70        | 130                                |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.40             |       | 0.5000         |                  | 79.3 | 70        | 130                                |      |                     |      |
| Surr: Toluene-d8            | 0.45             |       | 0.5000         |                  | 90.2 | 70        | 130                                |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.42             |       | 0.5000         |                  | 84.2 | 70        | 130                                |      |                     |      |

|               |                  |       |                |                  |      |           |                                    |      |                     |      |
|---------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID     | <b>lcs-15512</b> |       | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:    | <b>LCSS</b>      |       | Batch ID:      | <b>15512</b>     |      | RunNo:    | <b>21567</b>                       |      |                     |      |
| Prep Date:    | <b>9/25/2014</b> |       | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>631961</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| Benzene       | 1.0              | 0.050 | 1.000          | 0                | 99.7 | 70        | 130                                |      |                     |      |
| Toluene       | 1.0              | 0.050 | 1.000          | 0                | 101  | 70        | 130                                |      |                     |      |
| Chlorobenzene | 0.99             | 0.050 | 1.000          | 0                | 99.2 | 70        | 130                                |      |                     |      |

### Qualifiers:

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

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |       |                          |             |      |                                       |           |              |          |      |
|-----------------------------|-----------|-------|--------------------------|-------------|------|---------------------------------------|-----------|--------------|----------|------|
| Sample ID                   | Ics-15512 |       | SampType: LCS            |             |      | TestCode: EPA Method 8260B: Volatiles |           |              |          |      |
| Client ID:                  | LCSS      |       | Batch ID: 15512          |             |      | RunNo: 21567                          |           |              |          |      |
| Prep Date:                  | 9/25/2014 |       | Analysis Date: 9/30/2014 |             |      | SeqNo: 631961                         |           | Units: mg/Kg |          |      |
| Analyte                     | Result    | PQL   | SPK value                | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD         | RPDLimit | Qual |
| 1,1-Dichloroethene          | 1.0       | 0.050 | 1.000                    | 0           | 101  | 60.5                                  | 160       |              |          |      |
| Trichloroethene (TCE)       | 0.95      | 0.050 | 1.000                    | 0           | 94.7 | 58.8                                  | 139       |              |          |      |
| Surr: Dibromofluoromethane  | 0.38      |       | 0.5000                   |             | 76.6 | 70                                    | 130       |              |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.39      |       | 0.5000                   |             | 78.9 | 70                                    | 130       |              |          |      |
| Surr: Toluene-d8            | 0.46      |       | 0.5000                   |             | 92.2 | 70                                    | 130       |              |          |      |
| Surr: 4-Bromofluorobenzene  | 0.42      |       | 0.5000                   |             | 84.6 | 70                                    | 130       |              |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |         |                          |             |                                           |          |              |      |          |      |
|--------------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15499  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                     | PBS       |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                     | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627937                             |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Toluene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Xylenes, Total                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| Acetone                        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromoform                      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromomethane                   | ND        | 0.00300 |                          |             |                                           |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroform                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloromethane                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15499  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | PBS       |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627937                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 2,2-Dichloropropane         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloropropene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Hexachlorobutadiene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Isopropylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Isopropyltoluene          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methylene chloride          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| n-Butylbenzene              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Hexanone                  | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| n-Propylbenzene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| sec-Butylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Styrene                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Methyl-2-pentanone        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| tert-Butylbenzene           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Tetrachloroethene (PCE)     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,2-DCE               | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,3-Dichloropropene   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichloroethene (TCE)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichlorofluoromethane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichloropropane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Vinyl chloride              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0207    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0235    |         | 0.02000                  |             | 117                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0206    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0199    |         | 0.02000                  |             | 99.7                                      | 70       | 130          |      |          |      |

|               |           |         |                          |             |                                           |          |              |      |          |      |
|---------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID     | LCS-15499 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:    | LCSS      |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:    | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627939                             |          | Units: mg/Kg |      |          |      |
| Analyte       | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Toluene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Chlorobenzene | 0.0103    | 0.00200 | 0.01000                  | 0           | 103                                       | 70       | 130          |      |          |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15499 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | LCSS      |         | Batch ID: 15499          |             | RunNo: 21473                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |         | Analysis Date: 9/25/2014 |             | SeqNo: 627939                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.00912   | 0.00200 | 0.01000                  | 0           | 91.2                                      | 70       | 130          |      |          |      |
| Trichloroethene (TCE)       | 0.00988   | 0.00200 | 0.01000                  | 0           | 98.8                                      | 61.6     | 131          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0213    |         | 0.02000                  |             | 107                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0228    |         | 0.02000                  |             | 114                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0201    |         | 0.02000                  |             | 101                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0201    |         | 0.02000                  |             | 100                                       | 70       | 130          |      |          |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

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Project: GROUP 9

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15506  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15506          |             | RunNo: 21494                              |          |              |      |          |      |
| Prep Date:                  | 9/25/2014 |      | Analysis Date: 9/26/2014 |             | SeqNo: 628613                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |                                           |          |              |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15506  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 15506     | RunNo:      | 21494                           |          |           |      |          |      |
| Prep Date:                 | 9/25/2014 | Analysis Date: | 9/26/2014 | SeqNo:      | 628613                          | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 2.4       |                | 3.330     |             | 72.5                            | 21       | 111       |      |          |      |
| Surr: Phenol-d5            | 2.6       |                | 3.330     |             | 76.9                            | 23.1     | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.5       |                | 3.330     |             | 44.2                            | 22.7     | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5      | 1.4       |                | 1.670     |             | 82.6                            | 24.5     | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |                | 1.670     |             | 76.5                            | 21.2     | 129       |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |                | 1.670     |             | 76.9                            | 39.4     | 107       |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | lcs-15506 |      | SampType: LCS            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15506          |             |      | RunNo: 21494                              |           |              |          |      |
| Prep Date:                 | 9/25/2014 |      | Analysis Date: 9/26/2014 |             |      | SeqNo: 628614                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Acenaphthene               | 1.2       | 0.20 | 1.670                    | 0           | 71.0 | 50.7                                      | 110       |              |          |      |
| 4-Chloro-3-methylphenol    | 3.0       | 0.50 | 3.330                    | 0           | 88.7 | 47.8                                      | 107       |              |          |      |
| 2-Chlorophenol             | 2.9       | 0.20 | 3.330                    | 0           | 85.6 | 45.7                                      | 108       |              |          |      |
| 1,4-Dichlorobenzene        | 1.3       | 0.20 | 1.670                    | 0           | 78.5 | 46.1                                      | 112       |              |          |      |
| 2,4-Dinitrotoluene         | 1.2       | 0.50 | 1.670                    | 0           | 69.9 | 44.9                                      | 114       |              |          |      |
| N-Nitrosodi-n-propylamine  | 1.3       | 0.20 | 1.670                    | 0           | 78.0 | 38.7                                      | 128       |              |          |      |
| 4-Nitrophenol              | 2.7       | 0.25 | 3.330                    | 0           | 79.7 | 40.2                                      | 103       |              |          |      |
| Pentachlorophenol          | 2.1       | 0.40 | 3.330                    | 0           | 64.6 | 32.9                                      | 94        |              |          |      |
| Phenol                     | 3.0       | 0.20 | 3.330                    | 0           | 90.0 | 44.1                                      | 109       |              |          |      |
| Pyrene                     | 1.3       | 0.20 | 1.670                    | 0           | 78.6 | 51.9                                      | 109       |              |          |      |
| 1,2,4-Trichlorobenzene     | 1.3       | 0.20 | 1.670                    | 0           | 80.4 | 49.5                                      | 115       |              |          |      |
| Surr: 2-Fluorophenol       | 2.5       |      | 3.330                    |             | 75.3 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.8       |      | 3.330                    |             | 85.0 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.5       |      | 3.330                    |             | 76.5 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |      | 1.670                    |             | 78.5 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 75.2 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |      | 1.670                    |             | 76.8 | 39.4                                      | 107       |              |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C41

21-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | MB-15593  |       | SampType: MBLK           |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | PBS       |       | Batch ID: 15593          |             | RunNo: 21606                       |          |              |      |          |      |
| Prep Date: | 9/29/2014 |       | Analysis Date: 10/2/2014 |             | SeqNo: 633786                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercury    | ND        | 0.033 |                          |             |                                    |          |              |      |          |      |

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | LCS-15593 |       | SampType: LCS            |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | LCSS      |       | Batch ID: 15593          |             | RunNo: 21606                       |          |              |      |          |      |
| Prep Date: | 9/29/2014 |       | Analysis Date: 10/2/2014 |             | SeqNo: 633787                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercury    | 0.17      | 0.033 | 0.1667                   | 0           | 104                                | 80       | 120          |      |          |      |

### Qualifiers:

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E Value above quantitation range  
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S Spike Recovery outside accepted recovery limits

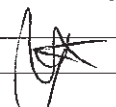
B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409C41

RcptNo: 1

|                   |                                                                                   |                      |
|-------------------|-----------------------------------------------------------------------------------|----------------------|
| Received by/date: |  | 09/25/14             |
| Logged By:        | Lindsay Mangin                                                                    | 9/25/2014 7:00:00 AM |
| Completed By:     | Lindsay Mangin                                                                    | 9/25/2014 8:38:20 AM |
| Reviewed By:      | CS                                                                                | 09/25/14             |

## Chain of Custody

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

## Log In

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

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

## Special Handling (if applicable)

- Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

|                      |       |       |                                                                                                                               |
|----------------------|-------|-------|-------------------------------------------------------------------------------------------------------------------------------|
| Person Notified:     | _____ | Date: | _____                                                                                                                         |
| By Whom:             | _____ | Via:  | <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person |
| Regarding:           | _____ |       |                                                                                                                               |
| Client Instructions: | _____ |       |                                                                                                                               |

17. Additional remarks:

## 18. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1         | 1.5                     | Good      | Yes         |         |           |           |



# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                    | Analytical Method              |
|----------------------------|--------------------------------|
| Antimony                   | SW-846 method 6010/6020        |
| Arsenic                    | SW-846 method 6010/6020        |
| Barium                     | SW-846 method 6010/6020        |
| Beryllium                  | SW-846 method 6010/6020        |
| Cadmium                    | SW-846 method 6010/6020        |
| Chromium                   | SW-846 method 6010/6020        |
| <del>Chromium VI</del>     | <del>SW-846 Method 3060A</del> |
| Cobalt                     | SW-846 method 6010/6020        |
| Cyanide                    | SW-846 method 335.4/335.2 mod  |
| Lead                       | SW-846 method 6010/6020        |
| <del>Tetraethyl lead</del> | <del>SW-846 Method 8270C</del> |
| Mercury                    | SW-846 method 7470/7471        |
| Nickel                     | SW-846 method 6010/6020        |
| Selenium                   | SW-846 method 6010/6020        |
| Silver                     | SW-846 method 6010/6020        |
| Vanadium                   | SW-846 method 6010/6020        |
| Zinc                       | SW-846 method 6010/6020        |



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

October 27, 2014

Kelly Robinson

Western Refining Southwest, Inc.  
#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409C42

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/25/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Analytical Report**Lab Order: **1409C42****Hall Environmental Analysis Laboratory, Inc.**Date Reported: **10/27/2014**

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-001A

**Client Sample ID:** SWMU 12 EB01  
**Collection Date:** 9/23/2014 5:30:00 PM  
**Matrix:** Aqueous

| Analyses                           | Result | RL  | Qual | Units               | DF | Date Analyzed        | Batch ID |
|------------------------------------|--------|-----|------|---------------------|----|----------------------|----------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      | Analyst: <b>RAA</b> |    |                      |          |
| Benzene                            | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Toluene                            | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Ethylbenzene                       | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Methyl tert-butyl ether (MTBE)     | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,2,4-Trimethylbenzene             | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,3,5-Trimethylbenzene             | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,2-Dichloroethane (EDC)           | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,2-Dibromoethane (EDB)            | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Naphthalene                        | ND     | 2.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1-Methylnaphthalene                | ND     | 4.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 2-Methylnaphthalene                | ND     | 4.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Acetone                            | ND     | 10  |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Bromobenzene                       | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Bromodichloromethane               | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Bromoform                          | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Bromomethane                       | ND     | 3.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 2-Butanone                         | ND     | 10  |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Carbon disulfide                   | ND     | 10  |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Carbon Tetrachloride               | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Chlorobenzene                      | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Chloroethane                       | ND     | 2.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Chloroform                         | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Chloromethane                      | ND     | 3.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 2-Chlorotoluene                    | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 4-Chlorotoluene                    | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| cis-1,2-DCE                        | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| cis-1,3-Dichloropropene            | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,2-Dibromo-3-chloropropane        | ND     | 2.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Dibromochloromethane               | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Dibromomethane                     | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,2-Dichlorobenzene                | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,3-Dichlorobenzene                | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,4-Dichlorobenzene                | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Dichlorodifluoromethane            | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,1-Dichloroethane                 | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,1-Dichloroethene                 | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,2-Dichloropropane                | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,3-Dichloropropane                | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 2,2-Dichloropropane                | ND     | 2.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,1-Dichloropropene                | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Hexachlorobutadiene                | ND     | 1.0 |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |

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

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

**Analytical Report**Lab Order: **1409C42**Date Reported: **10/27/2014****Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-001A

**Client Sample ID:** SWMU 12 EB01  
**Collection Date:** 9/23/2014 5:30:00 PM  
**Matrix:** Aqueous

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch ID |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|----------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |          |
| 2-Hexanone                         | ND     | 10     |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Isopropylbenzene                   | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 4-Isopropyltoluene                 | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 4-Methyl-2-pentanone               | ND     | 10     |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Methylene Chloride                 | ND     | 3.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| n-Butylbenzene                     | ND     | 3.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| n-Propylbenzene                    | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| sec-Butylbenzene                   | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Styrene                            | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| tert-Butylbenzene                  | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,1,1,2-Tetrachloroethane          | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,1,2,2-Tetrachloroethane          | ND     | 2.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Tetrachloroethene (PCE)            | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| trans-1,2-DCE                      | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| trans-1,3-Dichloropropene          | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,2,3-Trichlorobenzene             | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,2,4-Trichlorobenzene             | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,1,1-Trichloroethane              | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,1,2-Trichloroethane              | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Trichloroethene (TCE)              | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Trichlorofluoromethane             | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| 1,2,3-Trichloropropane             | ND     | 2.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Vinyl chloride                     | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Xylenes, Total                     | ND     | 1.5    |      | µg/L                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Surr: 1,2-Dichloroethane-d4        | 83.2   | 70-130 |      | %REC                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Surr: 4-Bromofluorobenzene         | 98.8   | 70-130 |      | %REC                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Surr: Dibromofluoromethane         | 85.2   | 70-130 |      | %REC                | 1  | 10/1/2014 9:37:35 PM | R21596   |
| Surr: Toluene-d8                   | 91.2   | 70-130 |      | %REC                | 1  | 10/1/2014 9:37:35 PM | R21596   |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: **1409C42**

Date Reported: **10/27/2014**

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-001B

**Client Sample ID:** SWMU 12 EB01  
**Collection Date:** 9/23/2014 5:30:00 PM  
**Matrix:** Aqueous

| Analyses                                | Result | RL       | Qual | Units | DF | Date Analyzed        | Batch ID            |
|-----------------------------------------|--------|----------|------|-------|----|----------------------|---------------------|
| <b>EPA METHOD 8015D: GASOLINE RANGE</b> |        |          |      |       |    |                      | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)           | ND     | 0.050    |      | mg/L  | 1  | 9/29/2014 3:38:16 PM | R21528              |
| Surr: BFB                               | 92.8   | 70.9-130 |      | %REC  | 1  | 9/29/2014 3:38:16 PM | R21528              |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: **1409C42**

Date Reported: **10/27/2014**

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-001C

**Client Sample ID:** SWMU 12 EB01  
**Collection Date:** 9/23/2014 5:30:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL     | Qual | Units | DF | Date Analyzed         | Batch ID            |
|---------------------------------------|--------|--------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE</b> |        |        |      |       |    |                       | Analyst: <b>BCN</b> |
| Diesel Range Organics (DRO)           | ND     | 1.0    |      | mg/L  | 1  | 9/26/2014 11:56:49 PM | 15448               |
| Motor Oil Range Organics (MRO)        | ND     | 5.0    |      | mg/L  | 1  | 9/26/2014 11:56:49 PM | 15448               |
| Surr: DNOP                            | 86.2   | 59-141 |      | %REC  | 1  | 9/26/2014 11:56:49 PM | 15448               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409C42

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-001D

**Client Sample ID:** SWMU 12 EB01  
**Collection Date:** 9/23/2014 5:30:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL | Qual | Units | DF | Date Analyzed        | Batch ID     |
|----------------------------------------|--------|----|------|-------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |    |      |       |    |                      | Analyst: JDC |
| Acenaphthene                           | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Acenaphthylene                         | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Aniline                                | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Anthracene                             | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Azobenzene                             | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Benz(a)anthracene                      | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Benzo(a)pyrene                         | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Benzo(b)fluoranthene                   | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Benzo(g,h,i)perylene                   | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Benzo(k)fluoranthene                   | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Benzoic acid                           | ND     | 20 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Benzyl alcohol                         | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Bis(2-chloroethoxy)methane             | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Bis(2-chloroethyl)ether                | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Bis(2-chloroisopropyl)ether            | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Bis(2-ethylhexyl)phthalate             | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 4-Bromophenyl phenyl ether             | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Butyl benzyl phthalate                 | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Carbazole                              | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 4-Chloro-3-methylphenol                | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 4-Chloroaniline                        | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 2-Chloronaphthalene                    | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 2-Chlorophenol                         | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 4-Chlorophenyl phenyl ether            | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Chrysene                               | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Di-n-butyl phthalate                   | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Di-n-octyl phthalate                   | ND     | 20 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Dibenz(a,h)anthracene                  | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Dibenzofuran                           | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 1,2-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 1,3-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 1,4-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 3,3'-Dichlorobenzidine                 | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Diethyl phthalate                      | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| Dimethyl phthalate                     | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 2,4-Dichlorophenol                     | ND     | 20 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 2,4-Dimethylphenol                     | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 4,6-Dinitro-2-methylphenol             | ND     | 20 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 2,4-Dinitrophenol                      | ND     | 20 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 2,4-Dinitrotoluene                     | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |
| 2,6-Dinitrotoluene                     | ND     | 10 |      | µg/L  | 1  | 9/29/2014 4:52:38 PM | 15566        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409C42

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-001D

**Client Sample ID:** SWMU 12 EB01  
**Collection Date:** 9/23/2014 5:30:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL        | Qual | Units        | DF | Date Analyzed        | Batch ID |
|----------------------------------------|--------|-----------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC |    |                      |          |
| Fluoranthene                           | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Fluorene                               | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Hexachlorobenzene                      | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Hexachlorobutadiene                    | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Hexachlorocyclopentadiene              | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Hexachloroethane                       | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Isophorone                             | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 1-Methylnaphthalene                    | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 2-Methylnaphthalene                    | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 2-Methylphenol                         | ND     | 20        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 3+4-Methylphenol                       | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| N-Nitrosodi-n-propylamine              | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| N-Nitrosodimethylamine                 | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| N-Nitrosodiphenylamine                 | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Naphthalene                            | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 2-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 3-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 4-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Nitrobenzene                           | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 2-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 4-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Pentachlorophenol                      | ND     | 20        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Phenanthrene                           | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Phenol                                 | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Pyrene                                 | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Pyridine                               | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| 2,4,6-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Surr: 2-Fluorophenol                   | 81.2   | 12.1-85.8 |      | %REC         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Surr: Phenol-d5                        | 67.8   | 17.7-65.8 | S    | %REC         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Surr: 2,4,6-Tribromophenol             | 85.6   | 26-138    |      | %REC         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Surr: Nitrobenzene-d5                  | 94.2   | 47.5-119  |      | %REC         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Surr: 2-Fluorobiphenyl                 | 94.1   | 48.1-106  |      | %REC         | 1  | 9/29/2014 4:52:38 PM | 15566    |
| Surr: 4-Terphenyl-d14                  | 100    | 44-113    |      | %REC         | 1  | 9/29/2014 4:52:38 PM | 15566    |

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

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

**Analytical Report**Lab Order: **1409C42**Date Reported: **10/27/2014****Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-001E

**Client Sample ID:** SWMU 12 EB01  
**Collection Date:** 9/23/2014 5:30:00 PM  
**Matrix:** Aqueous

| Analyses                                   | Result | RL   | Qual | Units                  | DF | Date Analyzed         | Batch ID            |
|--------------------------------------------|--------|------|------|------------------------|----|-----------------------|---------------------|
| <b>EPA METHOD 300.0: ANIONS</b>            |        |      |      |                        |    |                       | Analyst: <b>SRM</b> |
| Chloride                                   | ND     | 0.50 |      | mg/L                   | 1  | 9/25/2014 12:07:37 PM | R21489              |
| Nitrogen, Nitrite (As N)                   | ND     | 0.10 |      | mg/L                   | 1  | 9/25/2014 12:07:37 PM | R21489              |
| Nitrogen, Nitrate (As N)                   | ND     | 0.10 |      | mg/L                   | 1  | 9/25/2014 12:07:37 PM | R21489              |
| Sulfate                                    | ND     | 0.50 |      | mg/L                   | 1  | 9/25/2014 12:07:37 PM | R21489              |
| <b>SM2320B: ALKALINITY</b>                 |        |      |      |                        |    |                       | Analyst: <b>JRR</b> |
| Bicarbonate (As CaCO <sub>3</sub> )        | ND     | 20   |      | mg/L CaCO <sub>3</sub> | 1  | 9/29/2014 1:28:39 PM  | R21535              |
| Carbonate (As CaCO <sub>3</sub> )          | ND     | 2.0  |      | mg/L CaCO <sub>3</sub> | 1  | 9/29/2014 1:28:39 PM  | R21535              |
| Total Alkalinity (as CaCO <sub>3</sub> )   | ND     | 20   |      | mg/L CaCO <sub>3</sub> | 1  | 9/29/2014 1:28:39 PM  | R21535              |
| <b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b> |        |      |      |                        |    |                       | Analyst: <b>KS</b>  |
| Total Dissolved Solids                     | ND     | 20.0 |      | mg/L                   | 1  | 9/29/2014 1:13:00 PM  | 15546               |

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

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    | Page 7 of 38                                       |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409C42

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-001F

**Client Sample ID:** SWMU 12 EB01  
**Collection Date:** 9/23/2014 5:30:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL      | Qual | Units        | DF | Date Analyzed         | Batch ID |
|---------------------------------------|--------|---------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: TOTAL METALS</b> |        |         |      | Analyst: JLF |    |                       |          |
| Barium                                | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Beryllium                             | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Cadmium                               | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Calcium                               | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Chromium                              | ND     | 0.0060  |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Cobalt                                | ND     | 0.0060  |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Iron                                  | ND     | 0.020   |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Lead                                  | ND     | 0.0050  |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Magnesium                             | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Manganese                             | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Nickel                                | ND     | 0.010   |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Potassium                             | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Silver                                | ND     | 0.0050  |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Sodium                                | ND     | 1.0     |      | mg/L         | 1  | 10/1/2014 6:55:22 PM  | 15608    |
| Vanadium                              | ND     | 0.050   |      | mg/L         | 1  | 9/30/2014 7:16:14 PM  | 15608    |
| Zinc                                  | ND     | 0.010   |      | mg/L         | 1  | 10/1/2014 6:55:22 PM  | 15608    |
| <b>200.8 ICPMS METALS:TOTAL</b>       |        |         |      | Analyst: DBD |    |                       |          |
| Antimony                              | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 11:44:30 AM | 15608    |
| Arsenic                               | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 11:44:30 AM | 15608    |
| Selenium                              | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 11:44:30 AM | 15608    |
| <b>EPA METHOD 245.1: MERCURY</b>      |        |         |      | Analyst: MMD |    |                       |          |
| Mercury                               | ND     | 0.00020 |      | mg/L         | 1  | 10/21/2014 7:44:22 AM | 15994    |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409C42

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-001G

**Client Sample ID:** SWMU 12 EB01  
**Collection Date:** 9/23/2014 5:30:00 PM  
**Matrix:** Aqueous

| Analyses                                  | Result | RL      | Qual | Units        | DF | Date Analyzed         | Batch ID |
|-------------------------------------------|--------|---------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: DISSOLVED METALS</b> |        |         |      | Analyst: JLF |    |                       |          |
| Barium                                    | ND     | 0.0020  |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Beryllium                                 | ND     | 0.0020  |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Cadmium                                   | ND     | 0.0020  |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Calcium                                   | ND     | 1.0     |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Chromium                                  | ND     | 0.0060  |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Cobalt                                    | ND     | 0.0060  |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Iron                                      | ND     | 0.020   |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Lead                                      | ND     | 0.0050  |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Magnesium                                 | ND     | 1.0     |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Manganese                                 | ND     | 0.0020  |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Nickel                                    | ND     | 0.010   |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Potassium                                 | ND     | 1.0     |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Silver                                    | ND     | 0.0050  |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Sodium                                    | ND     | 1.0     |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Vanadium                                  | ND     | 0.050   |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| Zinc                                      | ND     | 0.010   |      | mg/L         | 1  | 9/25/2014 5:04:19 PM  | R21450   |
| <b>EPA 200.8: DISSOLVED METALS</b>        |        |         |      | Analyst: DBD |    |                       |          |
| Antimony                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 1:50:16 PM  | R21702   |
| Arsenic                                   | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 1:50:16 PM  | R21702   |
| Selenium                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 1:50:16 PM  | R21702   |
| <b>EPA METHOD 245.1: MERCURY</b>          |        |         |      | Analyst: MMD |    |                       |          |
| Mercury                                   | ND     | 0.00020 |      | mg/L         | 1  | 10/21/2014 7:46:08 AM | 15994    |

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

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



# Analytical Report

Lab Order: 1409C42

Date Reported: 10/27/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-002A

**Client Sample ID:** SWMU 12 FBO1  
**Collection Date:** 9/23/2014 5:15:00 PM  
**Matrix:** Aqueous

| Analyses                           | Result | RL  | Qual | Units | DF | Date Analyzed         | Batch ID     |
|------------------------------------|--------|-----|------|-------|----|-----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |       |    |                       | Analyst: RAA |
| Benzene                            | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Toluene                            | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Ethylbenzene                       | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Methyl tert-butyl ether (MTBE)     | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,2,4-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,3,5-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,2-Dichloroethane (EDC)           | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,2-Dibromoethane (EDB)            | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Naphthalene                        | ND     | 2.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 2-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Acetone                            | ND     | 10  |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Bromobenzene                       | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Bromodichloromethane               | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Bromoform                          | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Bromomethane                       | ND     | 3.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 2-Butanone                         | ND     | 10  |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Carbon disulfide                   | ND     | 10  |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Carbon Tetrachloride               | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Chlorobenzene                      | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Chloroethane                       | ND     | 2.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Chloroform                         | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Chloromethane                      | ND     | 3.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 2-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 4-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| cis-1,2-DCE                        | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| cis-1,3-Dichloropropene            | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,2-Dibromo-3-chloropropane        | ND     | 2.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Dibromochloromethane               | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Dibromomethane                     | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,2-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,3-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,4-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Dichlorodifluoromethane            | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,1-Dichloroethane                 | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,1-Dichloroethene                 | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,2-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,3-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 2,2-Dichloropropane                | ND     | 2.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| 1,1-Dichloropropene                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |
| Hexachlorobutadiene                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596       |

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

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

**Analytical Report**Lab Order: **1409C42**Date Reported: **10/27/2014****Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-002A

**Client Sample ID:** SWMU 12 FBO1  
**Collection Date:** 9/23/2014 5:15:00 PM  
**Matrix:** Aqueous

| Analyses                           | Result | RL     | Qual | Units | DF | Date Analyzed         | Batch ID            |
|------------------------------------|--------|--------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |       |    |                       | Analyst: <b>RAA</b> |
| 2-Hexanone                         | ND     | 10     |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Isopropylbenzene                   | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| 4-Isopropyltoluene                 | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| 4-Methyl-2-pentanone               | ND     | 10     |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Methylene Chloride                 | ND     | 3.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| n-Butylbenzene                     | ND     | 3.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| n-Propylbenzene                    | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| sec-Butylbenzene                   | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Styrene                            | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| tert-Butylbenzene                  | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| 1,1,1,2-Tetrachloroethane          | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| 1,1,2,2-Tetrachloroethane          | ND     | 2.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Tetrachloroethene (PCE)            | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| trans-1,2-DCE                      | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| trans-1,3-Dichloropropene          | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| 1,2,3-Trichlorobenzene             | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| 1,2,4-Trichlorobenzene             | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| 1,1,1-Trichloroethane              | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| 1,1,2-Trichloroethane              | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Trichloroethene (TCE)              | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Trichlorofluoromethane             | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| 1,2,3-Trichloropropane             | ND     | 2.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Vinyl chloride                     | ND     | 1.0    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Xylenes, Total                     | ND     | 1.5    |      | µg/L  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Surr: 1,2-Dichloroethane-d4        | 85.7   | 70-130 |      | %REC  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Surr: 4-Bromofluorobenzene         | 94.7   | 70-130 |      | %REC  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Surr: Dibromofluoromethane         | 86.3   | 70-130 |      | %REC  | 1  | 10/1/2014 10:05:23 PM | R21596              |
| Surr: Toluene-d8                   | 90.3   | 70-130 |      | %REC  | 1  | 10/1/2014 10:05:23 PM | R21596              |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409C42

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-002B

**Client Sample ID:** SWMU 12 FBO1  
**Collection Date:** 9/23/2014 5:15:00 PM  
**Matrix:** Aqueous

| Analyses                                | Result | RL       | Qual | Units | DF | Date Analyzed        | Batch ID     |
|-----------------------------------------|--------|----------|------|-------|----|----------------------|--------------|
| <b>EPA METHOD 8015D: GASOLINE RANGE</b> |        |          |      |       |    |                      | Analyst: NSB |
| Gasoline Range Organics (GRO)           | ND     | 0.050    |      | mg/L  | 1  | 9/29/2014 4:08:29 PM | R21528       |
| Surr: BFB                               | 91.8   | 70.9-130 |      | %REC  | 1  | 9/29/2014 4:08:29 PM | R21528       |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409C42

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-002C

**Client Sample ID:** SWMU 12 FBO1  
**Collection Date:** 9/23/2014 5:15:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL     | Qual | Units | DF | Date Analyzed         | Batch ID            |
|---------------------------------------|--------|--------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE</b> |        |        |      |       |    |                       | Analyst: <b>BCN</b> |
| Diesel Range Organics (DRO)           | ND     | 1.0    |      | mg/L  | 1  | 9/27/2014 12:18:20 AM | 15448               |
| Motor Oil Range Organics (MRO)        | ND     | 5.0    |      | mg/L  | 1  | 9/27/2014 12:18:20 AM | 15448               |
| Surr: DNOP                            | 98.3   | 59-141 |      | %REC  | 1  | 9/27/2014 12:18:20 AM | 15448               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409C42

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-002D

**Client Sample ID:** SWMU 12 FBO1  
**Collection Date:** 9/23/2014 5:15:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL | Qual | Units | DF | Date Analyzed        | Batch ID     |
|----------------------------------------|--------|----|------|-------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |    |      |       |    |                      | Analyst: JDC |
| Acenaphthene                           | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Acenaphthylene                         | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Aniline                                | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Anthracene                             | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Azobenzene                             | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Benz(a)anthracene                      | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Benzo(a)pyrene                         | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Benzo(b)fluoranthene                   | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Benzo(g,h,i)perylene                   | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Benzo(k)fluoranthene                   | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Benzoic acid                           | ND     | 20 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Benzyl alcohol                         | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Bis(2-chloroethoxy)methane             | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Bis(2-chloroethyl)ether                | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Bis(2-chloroisopropyl)ether            | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Bis(2-ethylhexyl)phthalate             | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 4-Bromophenyl phenyl ether             | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Butyl benzyl phthalate                 | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Carbazole                              | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 4-Chloro-3-methylphenol                | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 4-Chloroaniline                        | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 2-Chloronaphthalene                    | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 2-Chlorophenol                         | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 4-Chlorophenyl phenyl ether            | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Chrysene                               | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Di-n-butyl phthalate                   | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Di-n-octyl phthalate                   | ND     | 20 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Dibenz(a,h)anthracene                  | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Dibenzofuran                           | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 1,2-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 1,3-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 1,4-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 3,3'-Dichlorobenzidine                 | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Diethyl phthalate                      | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| Dimethyl phthalate                     | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 2,4-Dichlorophenol                     | ND     | 20 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 2,4-Dimethylphenol                     | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 4,6-Dinitro-2-methylphenol             | ND     | 20 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 2,4-Dinitrophenol                      | ND     | 20 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 2,4-Dinitrotoluene                     | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |
| 2,6-Dinitrotoluene                     | ND     | 10 |      | µg/L  | 1  | 9/29/2014 6:17:20 PM | 15566        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: **1409C42**

Date Reported: **10/27/2014**

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-002D

**Client Sample ID:** SWMU 12 FBO1  
**Collection Date:** 9/23/2014 5:15:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL        | Qual | Units               | DF | Date Analyzed        | Batch ID |
|----------------------------------------|--------|-----------|------|---------------------|----|----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: <b>JDC</b> |    |                      |          |
| Fluoranthene                           | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Fluorene                               | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Hexachlorobenzene                      | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Hexachlorobutadiene                    | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Hexachlorocyclopentadiene              | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Hexachloroethane                       | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Isophorone                             | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 1-Methylnaphthalene                    | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 2-Methylnaphthalene                    | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 2-Methylphenol                         | ND     | 20        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 3+4-Methylphenol                       | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| N-Nitrosodi-n-propylamine              | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| N-Nitrosodimethylamine                 | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| N-Nitrosodiphenylamine                 | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Naphthalene                            | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 2-Nitroaniline                         | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 3-Nitroaniline                         | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 4-Nitroaniline                         | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Nitrobenzene                           | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 2-Nitrophenol                          | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 4-Nitrophenol                          | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Pentachlorophenol                      | ND     | 20        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Phenanthrene                           | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Phenol                                 | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Pyrene                                 | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Pyridine                               | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| 2,4,6-Trichlorophenol                  | ND     | 10        |      | µg/L                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Surr: 2-Fluorophenol                   | 80.3   | 12.1-85.8 |      | %REC                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Surr: Phenol-d5                        | 65.5   | 17.7-65.8 |      | %REC                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Surr: 2,4,6-Tribromophenol             | 93.4   | 26-138    |      | %REC                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Surr: Nitrobenzene-d5                  | 94.9   | 47.5-119  |      | %REC                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Surr: 2-Fluorobiphenyl                 | 89.3   | 48.1-106  |      | %REC                | 1  | 9/29/2014 6:17:20 PM | 15566    |
| Surr: 4-Terphenyl-d14                  | 97.6   | 44-113    |      | %REC                | 1  | 9/29/2014 6:17:20 PM | 15566    |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: **1409C42**

Date Reported: **10/27/2014**

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-002E

**Client Sample ID:** SWMU 12 FBO1  
**Collection Date:** 9/23/2014 5:15:00 PM  
**Matrix:** Aqueous

| Analyses                                   | Result | RL   | Qual | Units      | DF | Date Analyzed         | Batch ID            |
|--------------------------------------------|--------|------|------|------------|----|-----------------------|---------------------|
| <b>EPA METHOD 300.0: ANIONS</b>            |        |      |      |            |    |                       | Analyst: <b>SRM</b> |
| Chloride                                   | ND     | 0.50 |      | mg/L       | 1  | 9/25/2014 12:57:16 PM | R21489              |
| Nitrogen, Nitrite (As N)                   | ND     | 0.10 |      | mg/L       | 1  | 9/25/2014 12:57:16 PM | R21489              |
| Nitrogen, Nitrate (As N)                   | 0.10   | 0.10 |      | mg/L       | 1  | 9/25/2014 12:57:16 PM | R21489              |
| Sulfate                                    | ND     | 0.50 |      | mg/L       | 1  | 9/25/2014 12:57:16 PM | R21489              |
| <b>SM2320B: ALKALINITY</b>                 |        |      |      |            |    |                       | Analyst: <b>JRR</b> |
| Bicarbonate (As CaCO3)                     | ND     | 20   |      | mg/L CaCO3 | 1  | 9/29/2014 1:34:39 PM  | R21535              |
| Carbonate (As CaCO3)                       | ND     | 2.0  |      | mg/L CaCO3 | 1  | 9/29/2014 1:34:39 PM  | R21535              |
| Total Alkalinity (as CaCO3)                | ND     | 20   |      | mg/L CaCO3 | 1  | 9/29/2014 1:34:39 PM  | R21535              |
| <b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b> |        |      |      |            |    |                       | Analyst: <b>KS</b>  |
| Total Dissolved Solids                     | ND     | 20.0 |      | mg/L       | 1  | 9/29/2014 1:13:00 PM  | 15546               |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409C42

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-002F

**Client Sample ID:** SWMU 12 FBO1  
**Collection Date:** 9/23/2014 5:15:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL      | Qual | Units        | DF | Date Analyzed         | Batch ID |
|---------------------------------------|--------|---------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: TOTAL METALS</b> |        |         |      | Analyst: JLF |    |                       |          |
| Barium                                | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Beryllium                             | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Cadmium                               | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Calcium                               | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Chromium                              | ND     | 0.0060  |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Cobalt                                | ND     | 0.0060  |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Iron                                  | ND     | 0.020   |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Lead                                  | ND     | 0.0050  |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Magnesium                             | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Manganese                             | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Nickel                                | ND     | 0.010   |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Potassium                             | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Silver                                | ND     | 0.0050  |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Sodium                                | ND     | 1.0     |      | mg/L         | 1  | 10/1/2014 7:01:27 PM  | 15608    |
| Vanadium                              | ND     | 0.050   |      | mg/L         | 1  | 9/30/2014 7:21:46 PM  | 15608    |
| Zinc                                  | ND     | 0.010   |      | mg/L         | 1  | 10/1/2014 7:01:27 PM  | 15608    |
| <b>200.8 ICPMS METALS:TOTAL</b>       |        |         |      | Analyst: DBD |    |                       |          |
| Antimony                              | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 11:49:51 AM | 15608    |
| Arsenic                               | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 11:49:51 AM | 15608    |
| Selenium                              | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 11:49:51 AM | 15608    |
| <b>EPA METHOD 245.1: MERCURY</b>      |        |         |      | Analyst: MMD |    |                       |          |
| Mercury                               | ND     | 0.00020 |      | mg/L         | 1  | 10/21/2014 7:47:55 AM | 15994    |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409C42

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409C42-002G

**Client Sample ID:** SWMU 12 FBO1  
**Collection Date:** 9/23/2014 5:15:00 PM  
**Matrix:** Aqueous

| Analyses                                  | Result | RL      | Qual | Units        | DF | Date Analyzed         | Batch ID |
|-------------------------------------------|--------|---------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: DISSOLVED METALS</b> |        |         |      | Analyst: JLF |    |                       |          |
| Barium                                    | ND     | 0.0020  |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Beryllium                                 | ND     | 0.0020  |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Cadmium                                   | ND     | 0.0020  |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Calcium                                   | ND     | 1.0     |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Chromium                                  | ND     | 0.0060  |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Cobalt                                    | ND     | 0.0060  |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Iron                                      | ND     | 0.020   |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Lead                                      | ND     | 0.0050  |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Magnesium                                 | ND     | 1.0     |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Manganese                                 | ND     | 0.0020  |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Nickel                                    | ND     | 0.010   |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Potassium                                 | ND     | 1.0     |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Silver                                    | ND     | 0.0050  |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Sodium                                    | ND     | 1.0     |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Vanadium                                  | ND     | 0.050   |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| Zinc                                      | 0.029  | 0.010   |      | mg/L         | 1  | 9/25/2014 5:08:06 PM  | R21450   |
| <b>EPA 200.8: DISSOLVED METALS</b>        |        |         |      | Analyst: DBD |    |                       |          |
| Antimony                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 2:01:00 PM  | R21702   |
| Arsenic                                   | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 2:01:00 PM  | R21702   |
| Selenium                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 2:01:00 PM  | R21702   |
| <b>EPA METHOD 245.1: MERCURY</b>          |        |         |      | Analyst: MMD |    |                       |          |
| Mercury                                   | ND     | 0.00020 |      | mg/L         | 1  | 10/21/2014 7:54:51 AM | 15994    |

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

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

# Anatek Labs, Inc.

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

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

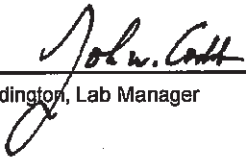
**Batch #:** 140926041  
**Project Name:** 1409C42

## Analytical Results Report

|                  |                             |                 |           |                    |           |           |           |
|------------------|-----------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140926041-001               | Sampling Date   | 9/23/2014 | Date/Time Received | 9/26/2014 | 12:30 PM  |           |
| Client Sample ID | 1409C42-001H / SWMU 12 EB01 |                 |           | Sampling Time      | 5:30 PM   |           |           |
| Matrix           | Water                       | Sample Location |           |                    |           |           |           |
| Comments         |                             |                 |           |                    |           |           |           |
| Parameter        | Result                      | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                          | mg/L            | 0.01      | 10/7/2014          | CRW       | EPA 335.4 |           |

|                  |                             |                 |           |                    |           |           |           |
|------------------|-----------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140926041-002               | Sampling Date   | 9/23/2014 | Date/Time Received | 9/26/2014 | 12:30 PM  |           |
| Client Sample ID | 1409C42-002H / SWMU 12 FB01 |                 |           | Sampling Time      | 5:15 PM   |           |           |
| Matrix           | Water                       | Sample Location |           |                    |           |           |           |
| Comments         |                             |                 |           |                    |           |           |           |
| Parameter        | Result                      | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                          | mg/L            | 0.01      | 10/7/2014          | CRW       | EPA 335.4 |           |

Authorized Signature

  
John Coddington, Lab Manager

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

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

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

Tuesday, October 14, 2014

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# Anatek Labs, Inc.

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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB **Batch #:** 140926041  
**Address:** 4901 HAWKINS NE SUITE D **Project Name:** 1409C42  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|-----------|---------------|
| Cyanide   | 0.529      | mg/L  | 0.5       | 105.8 | 90-110  | 10/7/2014 | 10/7/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|-------|---------|-----------|---------------|
| 140925049-001 | Cyanide   | ND            | 0.529     | mg/L  | 0.5      | 105.8 | 90-110  | 10/7/2014 | 10/7/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec  | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|------|---------|-----------|---------------|
| Cyanide   | 0.526      | mg/L  | 0.5       | 105.2 | 0.6  | 0-20    | 10/7/2014 | 10/7/2014     |

### Method Blank

| Parameter | Result | Units | PQL  | Prep Date | Analysis Date |
|-----------|--------|-------|------|-----------|---------------|
| Cyanide   | ND     | mg/L  | 0.01 | 10/7/2014 | 10/7/2014     |

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

### Comments:

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

Tuesday, October 14, 2014

Page 1 of 1

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |            |        |                                 |             |      |                                                     |           |                    |          |      |
|------------|------------|--------|---------------------------------|-------------|------|-----------------------------------------------------|-----------|--------------------|----------|------|
| Sample ID  | <b>MB</b>  |        | SampType: <b>MBLK</b>           |             |      | TestCode: <b>EPA Method 200.7: Dissolved Metals</b> |           |                    |          |      |
| Client ID: | <b>PBW</b> |        | Batch ID: <b>R21450</b>         |             |      | RunNo: <b>21450</b>                                 |           |                    |          |      |
| Prep Date: |            |        | Analysis Date: <b>9/25/2014</b> |             |      | SeqNo: <b>626978</b>                                |           | Units: <b>mg/L</b> |          |      |
| Analyte    | Result     | PQL    | SPK value                       | SPK Ref Val | %REC | LowLimit                                            | HighLimit | %RPD               | RPDLimit | Qual |
| Barium     | ND         | 0.0020 |                                 |             |      |                                                     |           |                    |          |      |
| Beryllium  | ND         | 0.0020 |                                 |             |      |                                                     |           |                    |          |      |
| Cadmium    | ND         | 0.0020 |                                 |             |      |                                                     |           |                    |          |      |
| Calcium    | ND         | 1.0    |                                 |             |      |                                                     |           |                    |          |      |
| Chromium   | ND         | 0.0060 |                                 |             |      |                                                     |           |                    |          |      |
| Cobalt     | ND         | 0.0060 |                                 |             |      |                                                     |           |                    |          |      |
| Iron       | ND         | 0.020  |                                 |             |      |                                                     |           |                    |          |      |
| Lead       | ND         | 0.0050 |                                 |             |      |                                                     |           |                    |          |      |
| Magnesium  | ND         | 1.0    |                                 |             |      |                                                     |           |                    |          |      |
| Manganese  | ND         | 0.0020 |                                 |             |      |                                                     |           |                    |          |      |
| Nickel     | ND         | 0.010  |                                 |             |      |                                                     |           |                    |          |      |
| Potassium  | ND         | 1.0    |                                 |             |      |                                                     |           |                    |          |      |
| Silver     | ND         | 0.0050 |                                 |             |      |                                                     |           |                    |          |      |
| Sodium     | ND         | 1.0    |                                 |             |      |                                                     |           |                    |          |      |
| Vanadium   | ND         | 0.050  |                                 |             |      |                                                     |           |                    |          |      |
| Zinc       | ND         | 0.010  |                                 |             |      |                                                     |           |                    |          |      |

|            |             |        |                                 |             |      |                                                     |           |                    |          |      |
|------------|-------------|--------|---------------------------------|-------------|------|-----------------------------------------------------|-----------|--------------------|----------|------|
| Sample ID  | <b>LCS</b>  |        | SampType: <b>LCS</b>            |             |      | TestCode: <b>EPA Method 200.7: Dissolved Metals</b> |           |                    |          |      |
| Client ID: | <b>LCSW</b> |        | Batch ID: <b>R21450</b>         |             |      | RunNo: <b>21450</b>                                 |           |                    |          |      |
| Prep Date: |             |        | Analysis Date: <b>9/25/2014</b> |             |      | SeqNo: <b>626979</b>                                |           | Units: <b>mg/L</b> |          |      |
| Analyte    | Result      | PQL    | SPK value                       | SPK Ref Val | %REC | LowLimit                                            | HighLimit | %RPD               | RPDLimit | Qual |
| Barium     | 0.48        | 0.0020 | 0.5000                          | 0           | 95.6 | 85                                                  | 115       |                    |          |      |
| Beryllium  | 0.49        | 0.0020 | 0.5000                          | 0           | 97.5 | 85                                                  | 115       |                    |          |      |
| Cadmium    | 0.48        | 0.0020 | 0.5000                          | 0           | 96.6 | 85                                                  | 115       |                    |          |      |
| Calcium    | 49          | 1.0    | 50.00                           | 0           | 98.4 | 85                                                  | 115       |                    |          |      |
| Chromium   | 0.47        | 0.0060 | 0.5000                          | 0           | 93.1 | 85                                                  | 115       |                    |          |      |
| Cobalt     | 0.47        | 0.0060 | 0.5000                          | 0           | 95.0 | 85                                                  | 115       |                    |          |      |
| Iron       | 0.49        | 0.020  | 0.5000                          | 0           | 98.6 | 85                                                  | 115       |                    |          |      |
| Lead       | 0.48        | 0.0050 | 0.5000                          | 0           | 96.0 | 85                                                  | 115       |                    |          |      |
| Magnesium  | 49          | 1.0    | 50.00                           | 0           | 98.5 | 85                                                  | 115       |                    |          |      |
| Manganese  | 0.48        | 0.0020 | 0.5000                          | 0           | 96.5 | 85                                                  | 115       |                    |          |      |
| Nickel     | 0.47        | 0.010  | 0.5000                          | 0           | 94.6 | 85                                                  | 115       |                    |          |      |
| Potassium  | 49          | 1.0    | 50.00                           | 0           | 97.2 | 85                                                  | 115       |                    |          |      |
| Silver     | 0.10        | 0.0050 | 0.1000                          | 0           | 101  | 85                                                  | 115       |                    |          |      |
| Sodium     | 49          | 1.0    | 50.00                           | 0           | 98.5 | 85                                                  | 115       |                    |          |      |
| Vanadium   | 0.49        | 0.050  | 0.5000                          | 0           | 97.9 | 85                                                  | 115       |                    |          |      |
| Zinc       | 0.49        | 0.010  | 0.5000                          | 0           | 97.1 | 85                                                  | 115       |                    |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID  | <b>1409C42-001FMS</b> |        | SampType:      | <b>MS</b>        |      | TestCode: | <b>EPA Method 200.7: Total Metals</b> |      |                    |      |
|------------|-----------------------|--------|----------------|------------------|------|-----------|---------------------------------------|------|--------------------|------|
| Client ID: | <b>SWMU 12 EB01</b>   |        | Batch ID:      | <b>15608</b>     |      | RunNo:    | <b>21558</b>                          |      |                    |      |
| Prep Date: | <b>9/30/2014</b>      |        | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>631352</b>                         |      | Units: <b>mg/L</b> |      |
| Analyte    | Result                | PQL    | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                             | %RPD | RPDLimit           | Qual |
| Barium     | 0.52                  | 0.0020 | 0.5000         | 0                | 103  | 70        | 130                                   |      |                    |      |
| Beryllium  | 0.53                  | 0.0020 | 0.5000         | 0                | 106  | 70        | 130                                   |      |                    |      |
| Cadmium    | 0.52                  | 0.0020 | 0.5000         | 0                | 104  | 70        | 130                                   |      |                    |      |
| Calcium    | 53                    | 1.0    | 50.00          | 0                | 107  | 70        | 130                                   |      |                    |      |
| Chromium   | 0.50                  | 0.0060 | 0.5000         | 0                | 101  | 70        | 130                                   |      |                    |      |
| Cobalt     | 0.52                  | 0.0060 | 0.5000         | 0                | 103  | 70        | 130                                   |      |                    |      |
| Iron       | 0.52                  | 0.020  | 0.5000         | 0                | 103  | 70        | 130                                   |      |                    |      |
| Lead       | 0.52                  | 0.0050 | 0.5000         | 0                | 103  | 70        | 130                                   |      |                    |      |
| Magnesium  | 53                    | 1.0    | 50.00          | 0                | 106  | 70        | 130                                   |      |                    |      |
| Manganese  | 0.52                  | 0.0020 | 0.5000         | 0                | 105  | 70        | 130                                   |      |                    |      |
| Nickel     | 0.52                  | 0.010  | 0.5000         | 0                | 104  | 70        | 130                                   |      |                    |      |
| Potassium  | 54                    | 1.0    | 50.00          | 0.2428           | 107  | 70        | 130                                   |      |                    |      |
| Silver     | 0.11                  | 0.0050 | 0.1000         | 0                | 108  | 70        | 130                                   |      |                    |      |
| Vanadium   | 0.53                  | 0.050  | 0.5000         | 0                | 106  | 70        | 130                                   |      |                    |      |

| Sample ID  | <b>1409C42-001FMSD</b> |        | SampType:      | <b>MSD</b>       |      | TestCode: | <b>EPA Method 200.7: Total Metals</b> |       |                    |      |
|------------|------------------------|--------|----------------|------------------|------|-----------|---------------------------------------|-------|--------------------|------|
| Client ID: | <b>SWMU 12 EB01</b>    |        | Batch ID:      | <b>15608</b>     |      | RunNo:    | <b>21558</b>                          |       |                    |      |
| Prep Date: | <b>9/30/2014</b>       |        | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>631353</b>                         |       | Units: <b>mg/L</b> |      |
| Analyte    | Result                 | PQL    | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                             | %RPD  | RPDLimit           | Qual |
| Barium     | 0.51                   | 0.0020 | 0.5000         | 0                | 102  | 70        | 130                                   | 1.34  | 20                 |      |
| Beryllium  | 0.52                   | 0.0020 | 0.5000         | 0                | 103  | 70        | 130                                   | 2.62  | 20                 |      |
| Cadmium    | 0.51                   | 0.0020 | 0.5000         | 0                | 103  | 70        | 130                                   | 1.91  | 20                 |      |
| Calcium    | 52                     | 1.0    | 50.00          | 0                | 105  | 70        | 130                                   | 1.93  | 20                 |      |
| Chromium   | 0.49                   | 0.0060 | 0.5000         | 0                | 98.7 | 70        | 130                                   | 2.05  | 20                 |      |
| Cobalt     | 0.51                   | 0.0060 | 0.5000         | 0                | 102  | 70        | 130                                   | 1.48  | 20                 |      |
| Iron       | 0.51                   | 0.020  | 0.5000         | 0                | 102  | 70        | 130                                   | 0.991 | 20                 |      |
| Lead       | 0.51                   | 0.0050 | 0.5000         | 0                | 102  | 70        | 130                                   | 0.956 | 20                 |      |
| Magnesium  | 52                     | 1.0    | 50.00          | 0                | 104  | 70        | 130                                   | 1.86  | 20                 |      |
| Manganese  | 0.52                   | 0.0020 | 0.5000         | 0                | 103  | 70        | 130                                   | 1.40  | 20                 |      |
| Nickel     | 0.51                   | 0.010  | 0.5000         | 0                | 101  | 70        | 130                                   | 2.46  | 20                 |      |
| Potassium  | 53                     | 1.0    | 50.00          | 0.2428           | 105  | 70        | 130                                   | 1.44  | 20                 |      |
| Silver     | 0.11                   | 0.0050 | 0.1000         | 0                | 105  | 70        | 130                                   | 2.28  | 20                 |      |
| Vanadium   | 0.52                   | 0.050  | 0.5000         | 0                | 104  | 70        | 130                                   | 1.39  | 20                 |      |

| Sample ID  | <b>MB-15608</b>  |     | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 200.7: Total Metals</b> |      |                    |      |
|------------|------------------|-----|----------------|------------------|------|-----------|---------------------------------------|------|--------------------|------|
| Client ID: | <b>PBW</b>       |     | Batch ID:      | <b>15608</b>     |      | RunNo:    | <b>21558</b>                          |      |                    |      |
| Prep Date: | <b>9/30/2014</b> |     | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>631361</b>                         |      | Units: <b>mg/L</b> |      |
| Analyte    | Result           | PQL | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                             | %RPD | RPDLimit           | Qual |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |        |                          |             |                                          |          |             |      |          |      |
|------------|-----------|--------|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB-15608  |        | SampType: MBLK           |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | PBW       |        | Batch ID: 15608          |             | RunNo: 21558                             |          |             |      |          |      |
| Prep Date: | 9/30/2014 |        | Analysis Date: 9/30/2014 |             | SeqNo: 631361                            |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL    | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Beryllium  | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Cadmium    | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Calcium    | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Chromium   | ND        | 0.0060 |                          |             |                                          |          |             |      |          |      |
| Cobalt     | ND        | 0.0060 |                          |             |                                          |          |             |      |          |      |
| Iron       | ND        | 0.020  |                          |             |                                          |          |             |      |          |      |
| Lead       | ND        | 0.0050 |                          |             |                                          |          |             |      |          |      |
| Magnesium  | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Manganese  | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Nickel     | ND        | 0.010  |                          |             |                                          |          |             |      |          |      |
| Potassium  | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Silver     | ND        | 0.0050 |                          |             |                                          |          |             |      |          |      |
| Sodium     | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Vanadium   | ND        | 0.050  |                          |             |                                          |          |             |      |          |      |
| Zinc       | ND        | 0.010  |                          |             |                                          |          |             |      |          |      |

|            |           |        |                          |             |                                          |          |             |      |          |      |
|------------|-----------|--------|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS-15608 |        | SampType: LCS            |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | LCSW      |        | Batch ID: 15608          |             | RunNo: 21558                             |          |             |      |          |      |
| Prep Date: | 9/30/2014 |        | Analysis Date: 9/30/2014 |             | SeqNo: 631362                            |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL    | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | 0.52      | 0.0020 | 0.5000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Beryllium  | 0.52      | 0.0020 | 0.5000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Cadmium    | 0.52      | 0.0020 | 0.5000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Chromium   | 0.50      | 0.0060 | 0.5000                   | 0           | 100                                      | 85       | 115         |      |          |      |
| Cobalt     | 0.52      | 0.0060 | 0.5000                   | 0           | 105                                      | 85       | 115         |      |          |      |
| Iron       | 0.51      | 0.020  | 0.5000                   | 0           | 102                                      | 85       | 115         |      |          |      |
| Lead       | 0.51      | 0.0050 | 0.5000                   | 0           | 103                                      | 85       | 115         |      |          |      |
| Manganese  | 0.53      | 0.0020 | 0.5000                   | 0           | 106                                      | 85       | 115         |      |          |      |
| Nickel     | 0.52      | 0.010  | 0.5000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Silver     | 0.11      | 0.0050 | 0.1000                   | 0           | 106                                      | 85       | 115         |      |          |      |
| Vanadium   | 0.52      | 0.050  | 0.5000                   | 0           | 105                                      | 85       | 115         |      |          |      |
| Zinc       | 0.54      | 0.010  | 0.5000                   | 0           | 108                                      | 85       | 115         |      |          |      |

|            |            |     |                          |             |                                          |          |             |      |          |      |
|------------|------------|-----|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS2-15608 |     | SampType: LCS            |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | LCSW       |     | Batch ID: 15608          |             | RunNo: 21558                             |          |             |      |          |      |
| Prep Date: | 9/30/2014  |     | Analysis Date: 9/30/2014 |             | SeqNo: 631363                            |          | Units: mg/L |      |          |      |
| Analyte    | Result     | PQL | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |

### Qualifiers:

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

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|            |            |     |                          |             |                                          |          |             |      |          |      |
|------------|------------|-----|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS2-15608 |     | SampType: LCS            |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | LCSW       |     | Batch ID: 15608          |             | RunNo: 21558                             |          |             |      |          |      |
| Prep Date: | 9/30/2014  |     | Analysis Date: 9/30/2014 |             | SeqNo: 631363                            |          | Units: mg/L |      |          |      |
| Analyte    | Result     | PQL | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Calcium    | 52         | 1.0 | 50.00                    | 0           | 104                                      | 85       | 115         |      |          |      |
| Magnesium  | 53         | 1.0 | 50.00                    | 0           | 105                                      | 85       | 115         |      |          |      |
| Potassium  | 53         | 1.0 | 50.00                    | 0           | 105                                      | 85       | 115         |      |          |      |
| Sodium     | 54         | 1.0 | 50.00                    | 0           | 107                                      | 85       | 115         |      |          |      |

|            |                |       |                          |             |                                          |          |             |      |          |      |
|------------|----------------|-------|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | 1409C42-001FMS |       | SampType: MS             |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | SWMU 12 EB01   |       | Batch ID: 15608          |             | RunNo: 21589                             |          |             |      |          |      |
| Prep Date: | 9/30/2014      |       | Analysis Date: 10/1/2014 |             | SeqNo: 632789                            |          | Units: mg/L |      |          |      |
| Analyte    | Result         | PQL   | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Sodium     | 51             | 1.0   | 50.00                    | 0           | 103                                      | 70       | 130         |      |          |      |
| Zinc       | 0.45           | 0.010 | 0.5000                   | 0           | 89.9                                     | 70       | 130         |      |          |      |

|            |                 |       |                          |             |                                          |          |             |       |          |      |
|------------|-----------------|-------|--------------------------|-------------|------------------------------------------|----------|-------------|-------|----------|------|
| Sample ID  | 1409C42-001FMSD |       | SampType: MSD            |             | TestCode: EPA Method 200.7: Total Metals |          |             |       |          |      |
| Client ID: | SWMU 12 EB01    |       | Batch ID: 15608          |             | RunNo: 21589                             |          |             |       |          |      |
| Prep Date: | 9/30/2014       |       | Analysis Date: 10/1/2014 |             | SeqNo: 632790                            |          | Units: mg/L |       |          |      |
| Analyte    | Result          | PQL   | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD  | RPDLimit | Qual |
| Sodium     | 51              | 1.0   | 50.00                    | 0           | 103                                      | 70       | 130         | 0.257 | 20       |      |
| Zinc       | 0.44            | 0.010 | 0.5000                   | 0           | 88.5                                     | 70       | 130         | 1.54  | 20       |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |        |        |           |                |           |          |           |                                       |          |      |        |      |  |
|------------|--------|--------|-----------|----------------|-----------|----------|-----------|---------------------------------------|----------|------|--------|------|--|
| Sample ID  | LCS    |        |           | SampType:      | LCS       |          |           | TestCode: EPA 200.8: Dissolved Metals |          |      |        |      |  |
| Client ID: | LCSW   |        |           | Batch ID:      | R21702    |          |           | RunNo: 21702                          |          |      |        |      |  |
| Prep Date: |        |        |           | Analysis Date: | 10/6/2014 |          |           | SeqNo:                                | 637046   |      | Units: | mg/L |  |
| Analyte    | Result | PQL    | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD                                  | RPDLimit | Qual |        |      |  |
| Antimony   | 0.024  | 0.0010 | 0.02500   | 0              | 95.6      | 85       | 115       |                                       |          |      |        |      |  |
| Arsenic    | 0.024  | 0.0010 | 0.02500   | 0              | 94.1      | 85       | 115       |                                       |          |      |        |      |  |
| Selenium   | 0.023  | 0.0010 | 0.02500   | 0              | 91.3      | 85       | 115       |                                       |          |      |        |      |  |

|            |        |                          |           |             |                                       |          |             |      |          |      |
|------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB     | SampType: MBLK           |           |             | TestCode: EPA 200.8: Dissolved Metals |          |             |      |          |      |
| Client ID: | PBW    | Batch ID: R21702         |           |             | RunNo: 21702                          |          |             |      |          |      |
| Prep Date: |        | Analysis Date: 10/6/2014 |           |             | SeqNo: 637048                         |          | Units: mg/L |      |          |      |
| Analyte    | Result | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Antimony   | ND     | 0.0010                   |           |             |                                       |          |             |      |          |      |
| Arsenic    | ND     | 0.0010                   |           |             |                                       |          |             |      |          |      |
| Selenium   | ND     | 0.0010                   |           |             |                                       |          |             |      |          |      |

|            |                |        |           |                          |      |                                       |           |             |          |      |
|------------|----------------|--------|-----------|--------------------------|------|---------------------------------------|-----------|-------------|----------|------|
| Sample ID  | 1409C42-001GMS |        |           | SampType: MS             |      | TestCode: EPA 200.8: Dissolved Metals |           |             |          |      |
| Client ID: | SWMU 12 EB01   |        |           | Batch ID: R21702         |      | RunNo: 21702                          |           |             |          |      |
| Prep Date: |                |        |           | Analysis Date: 10/6/2014 |      | SeqNo: 637051                         |           | Units: mg/L |          |      |
| Analyte    | Result         | PQL    | SPK value | SPK Ref Val              | %REC | LowLimit                              | HighLimit | %RPD        | RPDLimit | Qual |
| Antimony   | 0.024          | 0.0010 | 0.02500   | 0                        | 96.4 | 70                                    | 130       |             |          |      |
| Arsenic    | 0.023          | 0.0010 | 0.02500   | 0                        | 93.4 | 70                                    | 130       |             |          |      |
| Selenium   | 0.022          | 0.0010 | 0.02500   | 0                        | 89.6 | 70                                    | 130       |             |          |      |

### Qualifiers:

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

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |             |        |                          |             |                                    |          |             |      |          |      |
|------------|-------------|--------|--------------------------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LLLCS-15608 |        | SampType: LCSLL          |             | TestCode: 200.8 ICPMS Metals:Total |          |             |      |          |      |
| Client ID: | BatchQC     |        | Batch ID: 15608          |             | RunNo: 21584                       |          |             |      |          |      |
| Prep Date: | 9/30/2014   |        | Analysis Date: 10/1/2014 |             | SeqNo: 632578                      |          | Units: mg/L |      |          |      |
| Analyte    | Result      | PQL    | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Antimony   | 0.026       | 0.0010 | 0.02500                  | 0           | 103                                | 85       | 115         |      |          |      |
| Arsenic    | 0.025       | 0.0010 | 0.02500                  | 0           | 99.8                               | 85       | 115         |      |          |      |
| Selenium   | 0.024       | 0.0010 | 0.02500                  | 0           | 96.0                               | 85       | 115         |      |          |      |

|            |           |        |                          |             |                                    |          |             |      |          |      |
|------------|-----------|--------|--------------------------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB-15608  |        | SampType: MBLK           |             | TestCode: 200.8 ICPMS Metals:Total |          |             |      |          |      |
| Client ID: | PBW       |        | Batch ID: 15608          |             | RunNo: 21584                       |          |             |      |          |      |
| Prep Date: | 9/30/2014 |        | Analysis Date: 10/1/2014 |             | SeqNo: 632582                      |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL    | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Antimony   | ND        | 0.0010 |                          |             |                                    |          |             |      |          |      |
| Arsenic    | ND        | 0.0010 |                          |             |                                    |          |             |      |          |      |
| Selenium   | ND        | 0.0010 |                          |             |                                    |          |             |      |          |      |

### Qualifiers:

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P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |            |         |                |             |      |           |                           |      |             |      |  |
|------------|------------|---------|----------------|-------------|------|-----------|---------------------------|------|-------------|------|--|
| Sample ID  | MB-15994   |         | SampType:      | MBLK        |      | TestCode: | EPA Method 245.1: Mercury |      |             |      |  |
| Client ID: | PBW        |         | Batch ID:      | 15994       |      | RunNo:    | 22046                     |      |             |      |  |
| Prep Date: | 10/20/2014 |         | Analysis Date: | 10/21/2014  |      | SeqNo:    | 648108                    |      | Units: mg/L |      |  |
| Analyte    | Result     | PQL     | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                 | %RPD | RPDLimit    | Qual |  |
| Mercury    | ND         | 0.00020 |                |             |      |           |                           |      |             |      |  |

|            |            |         |                           |             |                                     |          |             |      |          |      |
|------------|------------|---------|---------------------------|-------------|-------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS-15994  |         | SampType: LCS             |             | TestCode: EPA Method 245.1: Mercury |          |             |      |          |      |
| Client ID: | LCSW       |         | Batch ID: 15994           |             | RunNo: 22046                        |          |             |      |          |      |
| Prep Date: | 10/20/2014 |         | Analysis Date: 10/21/2014 |             | SeqNo: 648109                       |          | Units: mg/L |      |          |      |
| Analyte    | Result     | PQL     | SPK value                 | SPK Ref Val | %REC                                | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Mercury    | 0.0052     | 0.00020 | 0.005000                  | 0           | 104                                 | 80       | 120         |      |          |      |

### Qualifiers:

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S Spike Recovery outside accepted recovery limits

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID <b>MB</b>      | SampType: <b>MBLK</b>           |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|--------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b>    | Batch ID: <b>R21489</b>         |      | RunNo: <b>21489</b>                       |             |                    |          |           |      |          |      |
| Prep Date:               | Analysis Date: <b>9/25/2014</b> |      | SeqNo: <b>628265</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                  | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride                 | ND                              | 0.50 |                                           |             |                    |          |           |      |          |      |
| Nitrogen, Nitrite (As N) | ND                              | 0.10 |                                           |             |                    |          |           |      |          |      |
| Nitrogen, Nitrate (As N) | ND                              | 0.10 |                                           |             |                    |          |           |      |          |      |
| Sulfate                  | ND                              | 0.50 |                                           |             |                    |          |           |      |          |      |

| Sample ID <b>LCS</b>     | SampType: <b>LCS</b>            |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|--------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>LCSW</b>   | Batch ID: <b>R21489</b>         |      | RunNo: <b>21489</b>                       |             |                    |          |           |      |          |      |
| Prep Date:               | Analysis Date: <b>9/25/2014</b> |      | SeqNo: <b>628266</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                  | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride                 | 4.5                             | 0.50 | 5.000                                     | 0           | 90.6               | 90       | 110       |      |          |      |
| Nitrogen, Nitrite (As N) | 0.95                            | 0.10 | 1.000                                     | 0           | 94.9               | 90       | 110       |      |          |      |
| Nitrogen, Nitrate (As N) | 2.4                             | 0.10 | 2.500                                     | 0           | 95.6               | 90       | 110       |      |          |      |
| Sulfate                  | 9.3                             | 0.50 | 10.00                                     | 0           | 93.1               | 90       | 110       |      |          |      |

| Sample ID <b>1409C42-001EMS</b> | SampType: <b>MS</b>             |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|---------------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>SWMU 12 EB01</b>  | Batch ID: <b>R21489</b>         |      | RunNo: <b>21489</b>                       |             |                    |          |           |      |          |      |
| Prep Date:                      | Analysis Date: <b>9/25/2014</b> |      | SeqNo: <b>628268</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                         | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride                        | 4.6                             | 0.50 | 5.000                                     | 0           | 92.5               | 92.6     | 107       |      |          | S    |
| Nitrogen, Nitrite (As N)        | 0.97                            | 0.10 | 1.000                                     | 0           | 96.9               | 75.5     | 104       |      |          |      |
| Nitrogen, Nitrate (As N)        | 2.4                             | 0.10 | 2.500                                     | 0           | 98.0               | 87.8     | 111       |      |          |      |
| Sulfate                         | 9.5                             | 0.50 | 10.00                                     | 0           | 95.3               | 90.4     | 111       |      |          |      |

| Sample ID <b>1409C42-001EMSD</b> | SampType: <b>MSD</b>            |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |        |          |      |
|----------------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|--------|----------|------|
| Client ID: <b>SWMU 12 EB01</b>   | Batch ID: <b>R21489</b>         |      | RunNo: <b>21489</b>                       |             |                    |          |           |        |          |      |
| Prep Date:                       | Analysis Date: <b>9/25/2014</b> |      | SeqNo: <b>628269</b>                      |             | Units: <b>mg/L</b> |          |           |        |          |      |
| Analyte                          | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD   | RPDLimit | Qual |
| Chloride                         | 4.6                             | 0.50 | 5.000                                     | 0           | 92.6               | 92.6     | 107       | 0.0122 | 20       | S    |
| Nitrogen, Nitrite (As N)         | 0.97                            | 0.10 | 1.000                                     | 0           | 97.0               | 75.5     | 104       | 0.0384 | 20       |      |
| Nitrogen, Nitrate (As N)         | 2.4                             | 0.10 | 2.500                                     | 0           | 98.0               | 87.8     | 111       | 0.0136 | 20       |      |
| Sulfate                          | 9.5                             | 0.50 | 10.00                                     | 0           | 95.2               | 90.4     | 111       | 0.0752 | 20       |      |

| Sample ID <b>MB</b>   | SampType: <b>MBLK</b>           |     | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|-----------------------|---------------------------------|-----|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b> | Batch ID: <b>R21489</b>         |     | RunNo: <b>21489</b>                       |             |                    |          |           |      |          |      |
| Prep Date:            | Analysis Date: <b>9/25/2014</b> |     | SeqNo: <b>628319</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte               | Result                          | PQL | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                          |        |                          |           |             |                                    |          |             |      |          |      |
|--------------------------|--------|--------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID                | MB     | SampType: MBLK           |           |             | TestCode: EPA Method 300.0: Anions |          |             |      |          |      |
| Client ID:               | PBW    | Batch ID: R21489         |           |             | RunNo: 21489                       |          |             |      |          |      |
| Prep Date:               |        | Analysis Date: 9/25/2014 |           |             | SeqNo: 628319                      |          | Units: mg/L |      |          |      |
| Analyte                  | Result | PQL                      | SPK value | SPK Ref Val | %REC                               | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Chloride                 | ND     | 0.50                     |           |             |                                    |          |             |      |          |      |
| Nitrogen, Nitrite (As N) | ND     | 0.10                     |           |             |                                    |          |             |      |          |      |
| Nitrogen, Nitrate (As N) | ND     | 0.10                     |           |             |                                    |          |             |      |          |      |
| Sulfate                  | ND     | 0.50                     |           |             |                                    |          |             |      |          |      |

|                          |        |      |                          |             |                                    |          |             |      |          |      |
|--------------------------|--------|------|--------------------------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID                | LCS    |      | SampType: LCS            |             | TestCode: EPA Method 300.0: Anions |          |             |      |          |      |
| Client ID:               | LCSW   |      | Batch ID: R21489         |             | RunNo: 21489                       |          |             |      |          |      |
| Prep Date:               |        |      | Analysis Date: 9/25/2014 |             | SeqNo: 628320                      |          | Units: mg/L |      |          |      |
| Analyte                  | Result | PQL  | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Chloride                 | 4.5    | 0.50 | 5.000                    | 0           | 90.8                               | 90       | 110         |      |          |      |
| Nitrogen, Nitrite (As N) | 0.97   | 0.10 | 1.000                    | 0           | 97.1                               | 90       | 110         |      |          |      |
| Nitrogen, Nitrate (As N) | 2.4    | 0.10 | 2.500                    | 0           | 95.2                               | 90       | 110         |      |          |      |
| Sulfate                  | 9.3    | 0.50 | 10.00                    | 0           | 93.1                               | 90       | 110         |      |          |      |

### Qualifiers:

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

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |     |                          |             |                                          |          |             |      |          |      |
|--------------------------------|-----------|-----|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                      | MB-15448  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Diesel Range |          |             |      |          |      |
| Client ID:                     | PBW       |     | Batch ID: 15448          |             | RunNo: 21477                             |          |             |      |          |      |
| Prep Date:                     | 9/23/2014 |     | Analysis Date: 9/26/2014 |             | SeqNo: 629312                            |          | Units: mg/L |      |          |      |
| Analyte                        | Result    | PQL | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 1.0 |                          |             |                                          |          |             |      |          |      |
| Motor Oil Range Organics (MRO) | ND        | 5.0 |                          |             |                                          |          |             |      |          |      |
| Surr: DNOP                     | 0.87      |     | 1.000                    |             | 87.1                                     | 59       | 141         |      |          |      |

|                             |           |     |                          |             |                                          |          |             |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                   | LCS-15448 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range |          |             |      |          |      |
| Client ID:                  | LCSW      |     | Batch ID: 15448          |             | RunNo: 21477                             |          |             |      |          |      |
| Prep Date:                  | 9/23/2014 |     | Analysis Date: 9/26/2014 |             | SeqNo: 629313                            |          | Units: mg/L |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 4.9       | 1.0 | 5.000                    | 0           | 98.9                                     | 69.7     | 142         |      |          |      |
| Surr: DNOP                  | 0.48      |     | 0.5000                   |             | 96.6                                     | 59       | 141         |      |          |      |

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S Spike Recovery outside accepted recovery limits

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                               |                                 |       |           |                                                   |      |                    |           |      |          |      |
|-------------------------------|---------------------------------|-------|-----------|---------------------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID <b>B23</b>          | SampType: <b>MBLK</b>           |       |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                    |           |      |          |      |
| Client ID: <b>PBW</b>         | Batch ID: <b>R21528</b>         |       |           | RunNo: <b>21528</b>                               |      |                    |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/29/2014</b> |       |           | SeqNo: <b>629902</b>                              |      | Units: <b>mg/L</b> |           |      |          |      |
| Analyte                       | Result                          | PQL   | SPK value | SPK Ref Val                                       | %REC | LowLimit           | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 0.050 |           |                                                   |      |                    |           |      |          |      |
| Surr: BFB                     | 18                              |       | 20.00     |                                                   | 90.2 | 70.9               | 130       |      |          |      |

|                                |                                 |       |           |                                                   |      |                    |           |      |          |      |
|--------------------------------|---------------------------------|-------|-----------|---------------------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID <b>2.5UG GRO LCS</b> | SampType: <b>LCS</b>            |       |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                    |           |      |          |      |
| Client ID: <b>LCSW</b>         | Batch ID: <b>R21528</b>         |       |           | RunNo: <b>21528</b>                               |      |                    |           |      |          |      |
| Prep Date:                     | Analysis Date: <b>9/29/2014</b> |       |           | SeqNo: <b>629903</b>                              |      | Units: <b>mg/L</b> |           |      |          |      |
| Analyte                        | Result                          | PQL   | SPK value | SPK Ref Val                                       | %REC | LowLimit           | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)  | 0.46                            | 0.050 | 0.5000    | 0                                                 | 93.0 | 80                 | 120       |      |          |      |
| Surr: BFB                      | 20                              |       | 20.00     |                                                   | 99.1 | 70.9               | 130       |      |          |      |

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S Spike Recovery outside accepted recovery limits

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RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |        |                |           |             |                             |          |           |      |          |      |
|--------------------------------|--------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                      | 5ml-rb | SampType:      | MBLK      | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:                     | PBW    | Batch ID:      | R21596    | RunNo:      | 21596                       |          |           |      |          |      |
| Prep Date:                     |        | Analysis Date: | 10/1/2014 | SeqNo:      | 633038                      | Units:   | µg/L      |      |          |      |
| Analyte                        | Result | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene                        | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Toluene                        | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Ethylbenzene                   | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2,4-Trimethylbenzene         | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,3,5-Trimethylbenzene         | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Naphthalene                    | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| 1-Methylnaphthalene            | ND     | 4.0            |           |             |                             |          |           |      |          |      |
| 2-Methylnaphthalene            | ND     | 4.0            |           |             |                             |          |           |      |          |      |
| Acetone                        | ND     | 10             |           |             |                             |          |           |      |          |      |
| Bromobenzene                   | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Bromodichloromethane           | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Bromoform                      | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Bromomethane                   | ND     | 3.0            |           |             |                             |          |           |      |          |      |
| 2-Butanone                     | ND     | 10             |           |             |                             |          |           |      |          |      |
| Carbon disulfide               | ND     | 10             |           |             |                             |          |           |      |          |      |
| Carbon Tetrachloride           | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Chlorobenzene                  | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Chloroethane                   | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| Chloroform                     | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Chloromethane                  | ND     | 3.0            |           |             |                             |          |           |      |          |      |
| 2-Chlorotoluene                | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 4-Chlorotoluene                | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| cis-1,2-DCE                    | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| cis-1,3-Dichloropropene        | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| Dibromochloromethane           | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Dibromomethane                 | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2-Dichlorobenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,3-Dichlorobenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,4-Dichlorobenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Dichlorodifluoromethane        | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1-Dichloroethane             | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1-Dichloroethene             | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2-Dichloropropane            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,3-Dichloropropane            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 2,2-Dichloropropane            | ND     | 2.0            |           |             |                             |          |           |      |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |                |           |             |                             |          |           |      |          |      |
|-----------------------------|--------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                   | 5ml-rb | SampType:      | MBLK      | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:                  | PBW    | Batch ID:      | R21596    | RunNo:      | 21596                       |          |           |      |          |      |
| Prep Date:                  |        | Analysis Date: | 10/1/2014 | SeqNo:      | 633038                      | Units:   | µg/L      |      |          |      |
| Analyte                     | Result | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1-Dichloropropene         | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Hexachlorobutadiene         | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 2-Hexanone                  | ND     | 10             |           |             |                             |          |           |      |          |      |
| Isopropylbenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 4-Isopropyltoluene          | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 4-Methyl-2-pentanone        | ND     | 10             |           |             |                             |          |           |      |          |      |
| Methylene Chloride          | ND     | 3.0            |           |             |                             |          |           |      |          |      |
| n-Butylbenzene              | ND     | 3.0            |           |             |                             |          |           |      |          |      |
| n-Propylbenzene             | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| sec-Butylbenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Styrene                     | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| tert-Butylbenzene           | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| Tetrachloroethene (PCE)     | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| trans-1,2-DCE               | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| trans-1,3-Dichloropropene   | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichlorobenzene      | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2,4-Trichlorobenzene      | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,1-Trichloroethane       | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,2-Trichloroethane       | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Trichloroethene (TCE)       | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Trichlorofluoromethane      | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichloropropane      | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| Vinyl chloride              | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Xylenes, Total              | ND     | 1.5            |           |             |                             |          |           |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 8.4    |                | 10.00     |             | 84.3                        | 70       | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene  | 10     |                | 10.00     |             | 103                         | 70       | 130       |      |          |      |
| Surr: Dibromofluoromethane  | 8.7    |                | 10.00     |             | 86.6                        | 70       | 130       |      |          |      |
| Surr: Toluene-d8            | 9.6    |                | 10.00     |             | 96.2                        | 70       | 130       |      |          |      |

|               |           |                |           |             |                             |          |           |      |          |      |
|---------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID     | 100ng lcs | SampType:      | LCS       | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:    | LCSW      | Batch ID:      | R21596    | RunNo:      | 21596                       |          |           |      |          |      |
| Prep Date:    |           | Analysis Date: | 10/1/2014 | SeqNo:      | 633041                      | Units:   | µg/L      |      |          |      |
| Analyte       | Result    | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene       | 22        | 1.0            | 20.00     | 0           | 109                         | 70       | 130       |      |          |      |
| Toluene       | 21        | 1.0            | 20.00     | 0           | 103                         | 80       | 120       |      |          |      |
| Chlorobenzene | 21        | 1.0            | 20.00     | 0           | 105                         | 70       | 130       |      |          |      |

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# QC SUMMARY REPORT

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WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |                          |           |             |                                       |          |             |      |          |      |
|-----------------------------|-----------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID                   | 100ng lcs | SampType: LCS            |           |             | TestCode: EPA Method 8260B: VOLATILES |          |             |      |          |      |
| Client ID:                  | LCSW      | Batch ID: R21596         |           |             | RunNo: 21596                          |          |             |      |          |      |
| Prep Date:                  |           | Analysis Date: 10/1/2014 |           |             | SeqNo: 633041                         |          | Units: µg/L |      |          |      |
| Analyte                     | Result    | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 25        | 1.0                      | 20.00     | 0           | 123                                   | 82.6     | 131         |      |          |      |
| Trichloroethene (TCE)       | 20        | 1.0                      | 20.00     | 0           | 97.9                                  | 70       | 130         |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 8.6       |                          | 10.00     |             | 85.6                                  | 70       | 130         |      |          |      |
| Surr: 4-Bromofluorobenzene  | 10        |                          | 10.00     |             | 101                                   | 70       | 130         |      |          |      |
| Surr: Dibromofluoromethane  | 9.3       |                          | 10.00     |             | 93.2                                  | 70       | 130         |      |          |      |
| Surr: Toluene-d8            | 9.1       |                          | 10.00     |             | 91.1                                  | 70       | 130         |      |          |      |

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|                             |           |     |                          |             |                                           |          |             |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                   | mb-15566  |     | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                  | PBW       |     | Batch ID: 15566          |             | RunNo: 21529                              |          |             |      |          |      |
| Prep Date:                  | 9/29/2014 |     | Analysis Date: 9/29/2014 |             | SeqNo: 630020                             |          | Units: µg/L |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Acenaphthylene              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Aniline                     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Anthracene                  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Azobenzene                  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benz(a)anthracene           | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(a)pyrene              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(b)fluoranthene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(k)fluoranthene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzoic acid                | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| Benzyl alcohol              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Butyl benzyl phthalate      | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Carbazole                   | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Chloroaniline             | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2-Chloronaphthalene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2-Chlorophenol              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Chrysene                    | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Di-n-butyl phthalate        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Di-n-octyl phthalate        | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Dibenzofuran                | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Diethyl phthalate           | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Dimethyl phthalate          | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2,4-Dichlorophenol          | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| 2,4-Dimethylphenol          | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| 2,4-Dinitrophenol           | ND        | 20  |                          |             |                                           |          |             |      |          |      |

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# QC SUMMARY REPORT

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WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15566  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBW       | Batch ID:      | 15566     | RunNo:      | 21529                           |          |           |      |          |      |
| Prep Date:                 | 9/29/2014 | Analysis Date: | 9/29/2014 | SeqNo:      | 630020                          | Units:   | µg/L      |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 20             |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 10             |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 10             |           |             |                                 |          |           |      |          |      |
| N-Nitrosodimethylamine     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 20             |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 130       |                | 200.0     |             | 66.1                            | 12.1     | 85.8      |      |          |      |
| Surr: Phenol-d5            | 110       |                | 200.0     |             | 57.0                            | 17.7     | 65.8      |      |          |      |
| Surr: 2,4,6-Tribromophenol | 170       |                | 200.0     |             | 83.4                            | 26       | 138       |      |          |      |
| Surr: Nitrobenzene-d5      | 76        |                | 100.0     |             | 76.4                            | 47.5     | 119       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 72        |                | 100.0     |             | 72.5                            | 48.1     | 106       |      |          |      |
| Surr: 4-Terphenyl-d14      | 86        |                | 100.0     |             | 85.8                            | 44       | 113       |      |          |      |

### Qualifiers:

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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                            |           |     |                          |             |                                           |          |             |      |          |      |
|----------------------------|-----------|-----|--------------------------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | lcs-15566 |     | SampType: LCS            |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                 | LCSW      |     | Batch ID: 15566          |             | RunNo: 21529                              |          |             |      |          |      |
| Prep Date:                 | 9/29/2014 |     | Analysis Date: 9/29/2014 |             | SeqNo: 630021                             |          | Units: µg/L |      |          |      |
| Analyte                    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Acenaphthene               | 80        | 10  | 100.0                    | 0           | 80.2                                      | 47.9     | 114         |      |          |      |
| 4-Chloro-3-methylphenol    | 170       | 10  | 200.0                    | 0           | 86.9                                      | 51.7     | 122         |      |          |      |
| 2-Chlorophenol             | 160       | 10  | 200.0                    | 0           | 79.9                                      | 40.7     | 113         |      |          |      |
| 1,4-Dichlorobenzene        | 68        | 10  | 100.0                    | 0           | 67.6                                      | 39.6     | 99.9        |      |          |      |
| 2,4-Dinitrotoluene         | 82        | 10  | 100.0                    | 0           | 81.6                                      | 40.8     | 113         |      |          |      |
| N-Nitrosodi-n-propylamine  | 76        | 10  | 100.0                    | 0           | 75.7                                      | 51.2     | 111         |      |          |      |
| 4-Nitrophenol              | 140       | 10  | 200.0                    | 0           | 69.3                                      | 15.7     | 86.9        |      |          |      |
| Pentachlorophenol          | 140       | 20  | 200.0                    | 0           | 69.9                                      | 21.6     | 104         |      |          |      |
| Phenol                     | 130       | 10  | 200.0                    | 0           | 65.2                                      | 28.6     | 71.7        |      |          |      |
| Pyrene                     | 89        | 10  | 100.0                    | 0           | 89.4                                      | 54.2     | 128         |      |          |      |
| 1,2,4-Trichlorobenzene     | 75        | 10  | 100.0                    | 0           | 75.3                                      | 40.9     | 101         |      |          |      |
| Surr: 2-Fluorophenol       | 120       |     | 200.0                    |             | 61.2                                      | 12.1     | 85.8        |      |          |      |
| Surr: Phenol-d5            | 110       |     | 200.0                    |             | 55.4                                      | 17.7     | 65.8        |      |          |      |
| Surr: 2,4,6-Tribromophenol | 170       |     | 200.0                    |             | 86.0                                      | 26       | 138         |      |          |      |
| Surr: Nitrobenzene-d5      | 81        |     | 100.0                    |             | 80.6                                      | 47.5     | 119         |      |          |      |
| Surr: 2-Fluorobiphenyl     | 76        |     | 100.0                    |             | 75.9                                      | 48.1     | 106         |      |          |      |
| Surr: 4-Terphenyl-d14      | 92        |     | 100.0                    |             | 92.1                                      | 44       | 113         |      |          |      |

|                            |                |                          |           |             |                                           |          |             |      |          |      |
|----------------------------|----------------|--------------------------|-----------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | 1409C42-001Dms | SampType: MS             |           |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                 | SWMU 12 EB01   | Batch ID: 15566          |           |             | RunNo: 21529                              |          |             |      |          |      |
| Prep Date:                 | 9/29/2014      | Analysis Date: 9/29/2014 |           |             | SeqNo: 630042                             |          | Units: µg/L |      |          |      |
| Analyte                    | Result         | PQL                      | SPK value | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Acenaphthene               | 87             | 10                       | 100.0     | 0           | 87.2                                      | 52.5     | 94.5        |      |          |      |
| 4-Chloro-3-methylphenol    | 190            | 10                       | 200.0     | 0           | 96.6                                      | 45       | 103         |      |          |      |
| 2-Chlorophenol             | 170            | 10                       | 200.0     | 0           | 87.2                                      | 32.3     | 101         |      |          |      |
| 1,4-Dichlorobenzene        | 79             | 10                       | 100.0     | 0           | 79.2                                      | 34.5     | 97.5        |      |          |      |
| 2,4-Dinitrotoluene         | 84             | 10                       | 100.0     | 0           | 83.9                                      | 20.1     | 123         |      |          |      |
| N-Nitrosodi-n-propylamine  | 83             | 10                       | 100.0     | 0           | 82.5                                      | 26.9     | 131         |      |          |      |
| 4-Nitrophenol              | 130            | 10                       | 200.0     | 0           | 62.7                                      | 11.6     | 55.4        |      |          | S    |
| Pentachlorophenol          | 120            | 20                       | 200.0     | 0           | 62.1                                      | 17.6     | 88.9        |      |          |      |
| Phenol                     | 130            | 10                       | 200.0     | 0           | 66.6                                      | 18.4     | 66.5        |      |          | S    |
| Pyrene                     | 89             | 10                       | 100.0     | 0           | 89.1                                      | 43.1     | 111         |      |          |      |
| 1,2,4-Trichlorobenzene     | 85             | 10                       | 100.0     | 0           | 85.1                                      | 38.8     | 95.6        |      |          |      |
| Surr: 2-Fluorophenol       | 120            |                          | 200.0     |             | 61.9                                      | 12.1     | 85.8        |      |          |      |
| Surr: Phenol-d5            | 110            |                          | 200.0     |             | 56.3                                      | 17.7     | 65.8        |      |          |      |
| Surr: 2,4,6-Tribromophenol | 180            |                          | 200.0     |             | 87.6                                      | 26       | 138         |      |          |      |
| Surr: Nitrobenzene-d5      | 88             |                          | 100.0     |             | 87.9                                      | 47.5     | 119         |      |          |      |
| Surr: 2-Fluorobiphenyl     | 84             |                          | 100.0     |             | 84.4                                      | 48.1     | 106         |      |          |      |

### Qualifiers:

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 E Value above quantitation range  
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 S Spike Recovery outside accepted recovery limits

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                       |                |                |           |             |                                 |          |           |      |          |      |
|-----------------------|----------------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID             | 1409C42-001Dms | SampType:      | MS        | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:            | SWMU 12 EB01   | Batch ID:      | 15566     | RunNo:      | 21529                           |          |           |      |          |      |
| Prep Date:            | 9/29/2014      | Analysis Date: | 9/29/2014 | SeqNo:      | 630042                          | Units:   | µg/L      |      |          |      |
| Analyte               | Result         | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Terphenyl-d14 | 91             |                | 100.0     |             | 91.3                            | 44       | 113       |      |          |      |

|                            |                 |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | 1409C42-001Dmsd | SampType:      | MSD       | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | SWMU 12 EB01    | Batch ID:      | 15566     | RunNo:      | 21529                           |          |           |      |          |      |
| Prep Date:                 | 9/29/2014       | Analysis Date: | 9/29/2014 | SeqNo:      | 630043                          | Units:   | µg/L      |      |          |      |
| Analyte                    | Result          | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene               | 84              | 10             | 100.0     | 0           | 84.4                            | 52.5     | 94.5      | 3.26 | 20       |      |
| 4-Chloro-3-methylphenol    | 190             | 10             | 200.0     | 0           | 94.7                            | 45       | 103       | 1.94 | 20       |      |
| 2-Chlorophenol             | 170             | 10             | 200.0     | 0           | 82.6                            | 32.3     | 101       | 5.43 | 20       |      |
| 1,4-Dichlorobenzene        | 74              | 10             | 100.0     | 0           | 74.5                            | 34.5     | 97.5      | 6.12 | 20       |      |
| 2,4-Dinitrotoluene         | 79              | 10             | 100.0     | 0           | 79.5                            | 20.1     | 123       | 5.36 | 20       |      |
| N-Nitrosodi-n-propylamine  | 81              | 10             | 100.0     | 0           | 81.4                            | 26.9     | 131       | 1.44 | 20       |      |
| 4-Nitrophenol              | 110             | 10             | 200.0     | 0           | 54.6                            | 11.6     | 55.4      | 13.9 | 20       |      |
| Pentachlorophenol          | 120             | 20             | 200.0     | 0           | 58.0                            | 17.6     | 88.9      | 6.73 | 20       |      |
| Phenol                     | 130             | 10             | 200.0     | 0           | 64.0                            | 18.4     | 66.5      | 4.03 | 20       |      |
| Pyrene                     | 93              | 10             | 100.0     | 0           | 92.8                            | 43.1     | 111       | 4.11 | 20       |      |
| 1,2,4-Trichlorobenzene     | 83              | 10             | 100.0     | 0           | 82.7                            | 38.8     | 95.6      | 2.91 | 20       |      |
| Surr: 2-Fluorophenol       | 120             |                | 200.0     |             | 60.3                            | 12.1     | 85.8      | 0    | 0        |      |
| Surr: Phenol-d5            | 110             |                | 200.0     |             | 54.5                            | 17.7     | 65.8      | 0    | 0        |      |
| Surr: 2,4,6-Tribromophenol | 180             |                | 200.0     |             | 91.2                            | 26       | 138       | 0    | 0        |      |
| Surr: Nitrobenzene-d5      | 86              |                | 100.0     |             | 86.2                            | 47.5     | 119       | 0    | 0        |      |
| Surr: 2-Fluorobiphenyl     | 83              |                | 100.0     |             | 82.6                            | 48.1     | 106       | 0    | 0        |      |
| Surr: 4-Terphenyl-d14      | 97              |                | 100.0     |             | 97.1                            | 44       | 113       | 0    | 0        |      |

### Qualifiers:

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- E Value above quantitation range
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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |     |                          |             |                               |          |                   |      |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|-------------------------------|----------|-------------------|------|----------|------|
| Sample ID                   | mb-1   |     | SampType: MBLK           |             | TestCode: SM2320B: Alkalinity |          |                   |      |          |      |
| Client ID:                  | PBW    |     | Batch ID: R21535         |             | RunNo: 21535                  |          |                   |      |          |      |
| Prep Date:                  |        |     | Analysis Date: 9/29/2014 |             | SeqNo: 630555                 |          | Units: mg/L CaCO3 |      |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC                          | LowLimit | HighLimit         | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | ND     | 20  |                          |             |                               |          |                   |      |          |      |

|                             |        |     |                          |             |                               |          |                   |      |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|-------------------------------|----------|-------------------|------|----------|------|
| Sample ID                   | Ics-1  |     | SampType: LCS            |             | TestCode: SM2320B: Alkalinity |          |                   |      |          |      |
| Client ID:                  | LCSW   |     | Batch ID: R21535         |             | RunNo: 21535                  |          |                   |      |          |      |
| Prep Date:                  |        |     | Analysis Date: 9/29/2014 |             | SeqNo: 630556                 |          | Units: mg/L CaCO3 |      |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC                          | LowLimit | HighLimit         | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 76     | 20  | 80.00                    | 0           | 94.4                          | 90       | 110               |      |          |      |

|                             |        |     |                          |             |                               |          |                   |      |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|-------------------------------|----------|-------------------|------|----------|------|
| Sample ID                   | mb-2   |     | SampType: MBLK           |             | TestCode: SM2320B: Alkalinity |          |                   |      |          |      |
| Client ID:                  | PBW    |     | Batch ID: R21535         |             | RunNo: 21535                  |          |                   |      |          |      |
| Prep Date:                  |        |     | Analysis Date: 9/29/2014 |             | SeqNo: 630572                 |          | Units: mg/L CaCO3 |      |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC                          | LowLimit | HighLimit         | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | ND     | 20  |                          |             |                               |          |                   |      |          |      |

|                             |        |     |                          |             |                               |          |                   |      |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|-------------------------------|----------|-------------------|------|----------|------|
| Sample ID                   | Ics-2  |     | SampType: LCS            |             | TestCode: SM2320B: Alkalinity |          |                   |      |          |      |
| Client ID:                  | LCSW   |     | Batch ID: R21535         |             | RunNo: 21535                  |          |                   |      |          |      |
| Prep Date:                  |        |     | Analysis Date: 9/29/2014 |             | SeqNo: 630573                 |          | Units: mg/L CaCO3 |      |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC                          | LowLimit | HighLimit         | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 82     | 20  | 80.00                    | 0           | 103                           | 90       | 110               |      |          |      |

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ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409C42

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                        |           |      |                          |             |                                               |          |             |      |          |      |
|------------------------|-----------|------|--------------------------|-------------|-----------------------------------------------|----------|-------------|------|----------|------|
| Sample ID              | MB-15546  |      | SampType: MBLK           |             | TestCode: SM2540C MOD: Total Dissolved Solids |          |             |      |          |      |
| Client ID:             | PBW       |      | Batch ID: 15546          |             | RunNo: 21516                                  |          |             |      |          |      |
| Prep Date:             | 9/26/2014 |      | Analysis Date: 9/29/2014 |             | SeqNo: 629491                                 |          | Units: mg/L |      |          |      |
| Analyte                | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                          | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Total Dissolved Solids | ND        | 20.0 |                          |             |                                               |          |             |      |          |      |

|                        |           |      |                          |             |                                               |          |             |      |          |      |
|------------------------|-----------|------|--------------------------|-------------|-----------------------------------------------|----------|-------------|------|----------|------|
| Sample ID              | LCS-15546 |      | SampType: LCS            |             | TestCode: SM2540C MOD: Total Dissolved Solids |          |             |      |          |      |
| Client ID:             | LCSW      |      | Batch ID: 15546          |             | RunNo: 21516                                  |          |             |      |          |      |
| Prep Date:             | 9/26/2014 |      | Analysis Date: 9/29/2014 |             | SeqNo: 629492                                 |          | Units: mg/L |      |          |      |
| Analyte                | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                          | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Total Dissolved Solids | 1020      | 20.0 | 1000                     | 0           | 102                                           | 80       | 120         |      |          |      |

|                        |                |      |                          |             |                                               |          |             |      |          |      |
|------------------------|----------------|------|--------------------------|-------------|-----------------------------------------------|----------|-------------|------|----------|------|
| Sample ID              | 1409C42-002EMS |      | SampType: MS             |             | TestCode: SM2540C MOD: Total Dissolved Solids |          |             |      |          |      |
| Client ID:             | SWMU 12 FBO1   |      | Batch ID: 15546          |             | RunNo: 21516                                  |          |             |      |          |      |
| Prep Date:             | 9/26/2014      |      | Analysis Date: 9/29/2014 |             | SeqNo: 629505                                 |          | Units: mg/L |      |          |      |
| Analyte                | Result         | PQL  | SPK value                | SPK Ref Val | %REC                                          | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Total Dissolved Solids | 1040           | 20.0 | 1000                     | 16.00       | 102                                           | 80       | 120         |      |          |      |

|                        |                 |      |                |             |      |           |                                     |        |             |      |  |
|------------------------|-----------------|------|----------------|-------------|------|-----------|-------------------------------------|--------|-------------|------|--|
| Sample ID              | 1409C42-002EMSD |      | SampType:      | MSD         |      | TestCode: | SM2540C MOD: Total Dissolved Solids |        |             |      |  |
| Client ID:             | SWMU 12 FBO1    |      | Batch ID:      | 15546       |      | RunNo:    | 21516                               |        |             |      |  |
| Prep Date:             | 9/26/2014       |      | Analysis Date: | 9/29/2014   |      | SeqNo:    | 629506                              |        | Units: mg/L |      |  |
| Analyte                | Result          | PQL  | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                           | %RPD   | RPDLimit    | Qual |  |
| Total Dissolved Solids | 1040            | 20.0 | 1000           | 16.00       | 102  | 80        | 120                                 | 0.0963 | 5           |      |  |

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- RL Reporting Detection Limit

## Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409C42

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

9/25/2014 7:00:00 AM

Completed By: Lindsay Mangin

9/25/2014 8:46:00 AM

Reviewed By:

CS

09/25/14

*Lindsay Mangin*

*Lindsay Mangin*

### Chain of Custody

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

### Log In

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

# of preserved bottles checked for pH: 6, 2  
(2 or >12 unless noted)  
Adjusted? No  
Checked by: my

### Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 1.5     | Good      | Yes         |         |           |           |





## Metals and Cyanide for Soil and Groundwater Samples

TOTAL AND DISSOLVED FOR GW  
SAMPLES

| Analyte                    | Analytical Method              |
|----------------------------|--------------------------------|
| Antimony                   | SW-846 method 6010/6020        |
| Arsenic                    | SW-846 method 6010/6020        |
| Barium                     | SW-846 method 6010/6020        |
| Beryllium                  | SW-846 method 6010/6020        |
| Cadmium                    | SW-846 method 6010/6020        |
| Chromium                   | SW-846 method 6010/6020        |
| <del>Chromium VI</del>     | <del>SW-846 Method 3060A</del> |
| Cobalt                     | SW-846 method 6010/6020        |
| Cyanide                    | SW-846 method 335.4/335.2 mod  |
| Lead                       | SW-846 method 6010/6020        |
| <del>Tetraethyl lead</del> | <del>SW-846 method 8270C</del> |
| Mercury                    | SW-846 method 7470/7471        |
| Nickel                     | SW-846 method 6010/6020        |
| Selenium                   | SW-846 method 6010/6020        |
| Silver                     | SW-846 method 6010/6020        |
| Vanadium                   | SW-846 method 6010/6020        |
| Zinc                       | SW-846 method 6010/6020        |



# General Chemistry Parameters for Groundwater Samples

| Analyte                | Analytical Method                        |
|------------------------|------------------------------------------|
| Total Dissolved Solids | SM-2540C                                 |
| Bicarbonate            | SM-2320B                                 |
| Chloride               | EPA method 300.0                         |
| Sulfate                | EPA method 300.0                         |
| Calcium                | EPA method 6010/6020                     |
| Magnesium              | EPA method 6010/6020                     |
| Sodium                 | EPA method 6010/6020                     |
| Potassium              | EPA method 6010/6020                     |
| Manganese              | SW-846 method 6010/6020                  |
| Nitrate/nitrite        | EPA method 300.0                         |
| Ferric/ferrous Iron    | SW-846 method 6010/6020 & SM<br>3500Fe2+ |



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

January 06, 2015

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: Group 9

OrderNo.: 1409E14

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/27/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued October 28, 2014

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



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

## Case Narrative

WO#: 1409E14  
Date: 1/6/2015

---

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9

---

Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E14**

Date Reported: **1/6/2015**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (0-0.5)

**Project:** Group 9

**Collection Date:** 9/26/2014 9:45:00 AM

**Lab ID:** 1409E14-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 26     | 10       |      | mg/Kg-dry | 1  | 9/30/2014 6:59:55 PM  | 15573                |
| Motor Oil Range Organics (MRO)                 | 60     | 52       |      | mg/Kg-dry | 1  | 9/30/2014 6:59:55 PM  | 15573                |
| Surr: DNOP                                     | 89.9   | 57.9-140 |      | %REC      | 1  | 9/30/2014 6:59:55 PM  | 15573                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.4      |      | mg/Kg-dry | 1  | 9/30/2014 6:56:58 PM  | R21557               |
| Surr: BFB                                      | 91.3   | 80-120   |      | %REC      | 1  | 9/30/2014 6:56:58 PM  | R21557               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 2.6    | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.083  | 0.033    |      | mg/Kg-dry | 1  | 10/7/2014 1:10:49 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 2:17:10 PM  | 15704                |
| Arsenic                                        | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:12:43 PM  | 15704                |
| Barium                                         | 240    | 0.10     |      | mg/Kg-dry | 1  | 10/7/2014 12:11:08 PM | 15704                |
| Beryllium                                      | 0.22   | 0.16     |      | mg/Kg-dry | 1  | 10/4/2014 1:12:43 PM  | 15704                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/4/2014 1:12:43 PM  | 15704                |
| Chromium                                       | 7.5    | 0.31     |      | mg/Kg-dry | 1  | 10/7/2014 12:11:08 PM | 15704                |
| Cobalt                                         | 3.5    | 0.31     |      | mg/Kg-dry | 1  | 10/4/2014 1:12:43 PM  | 15704                |
| Lead                                           | 4.3    | 0.26     |      | mg/Kg-dry | 1  | 10/7/2014 12:11:08 PM | 15704                |
| Nickel                                         | 4.9    | 0.52     |      | mg/Kg-dry | 1  | 10/4/2014 2:17:10 PM  | 15704                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/7/2014 12:11:08 PM | 15704                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/4/2014 1:12:43 PM  | 15704                |
| Vanadium                                       | 22     | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:12:43 PM  | 15704                |
| Zinc                                           | 42     | 2.6      |      | mg/Kg-dry | 1  | 10/7/2014 12:11:08 PM | 15704                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.41     |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.41     |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |
| Aniline                                        | ND     | 0.41     |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |
| Anthracene                                     | ND     | 0.41     |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |
| Azobenzene                                     | ND     | 0.41     |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.41     |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.41     |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.41     |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.41     |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.41     |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |
| Benzoic acid                                   | ND     | 1.0      |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.41     |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM  | 15576                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (0-0.5)

**Project:** Group 9

**Collection Date:** 9/26/2014 9:45:00 AM

**Lab ID:** 1409E14-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.0  |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Carbazole                              | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 1.0  |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 4-Chloroaniline                        | ND     | 1.0  |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.51 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Chrysene                               | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 1.0  |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.82 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Dibenzofuran                           | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.51 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.82 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.61 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.0  |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 1.0  |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 1.0  |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 1.0  |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Fluoranthene                           | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Fluorene                               | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Hexachloroethane                       | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| Isophorone                             | ND     | 1.0  |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/1/2014 7:11:54 PM | 15576        |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 3 of 38 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (0-0.5)

**Project:** Group 9

**Collection Date:** 9/26/2014 9:45:00 AM

**Lab ID:** 1409E14-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units         | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|-----------|------|---------------|----|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC  |    |                      |       |
| 2-Methylphenol                         | ND     | 1.0       |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| 3+4-Methylphenol                       | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| N-Nitrosodi-n-propylamine              | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| N-Nitrosodiphenylamine                 | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Naphthalene                            | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| 2-Nitroaniline                         | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| 3-Nitroaniline                         | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| 4-Nitroaniline                         | ND     | 0.82      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Nitrobenzene                           | ND     | 1.0       |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| 2-Nitrophenol                          | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| 4-Nitrophenol                          | ND     | 0.51      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Pentachlorophenol                      | ND     | 0.82      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Phenanthrene                           | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Phenol                                 | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Pyrene                                 | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Pyridine                               | ND     | 1.0       |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| 2,4,5-Trichlorophenol                  | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| 2,4,6-Trichlorophenol                  | ND     | 0.41      |      | mg/Kg-dry     | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Surr: 2-Fluorophenol                   | 84.3   | 21-111    |      | %REC          | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Surr: Phenol-d5                        | 86.1   | 23.1-117  |      | %REC          | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Surr: 2,4,6-Tribromophenol             | 69.4   | 22.7-88.9 |      | %REC          | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Surr: Nitrobenzene-d5                  | 87.3   | 24.5-126  |      | %REC          | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Surr: 2-Fluorobiphenyl                 | 83.6   | 21.2-129  |      | %REC          | 1  | 10/1/2014 7:11:54 PM | 15576 |
| Surr: 4-Terphenyl-d14                  | 91.1   | 39.4-107  |      | %REC          | 1  | 10/1/2014 7:11:54 PM | 15576 |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      | Analyst: cadg |    |                      |       |
| Benzene                                | ND     | 0.00178   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| Toluene                                | ND     | 0.00178   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| Ethylbenzene                           | ND     | 0.00178   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| Xylenes, Total                         | ND     | 0.00178   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00178   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00178   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00178   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00178   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00178   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| Naphthalene                            | ND     | 0.00178   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| 1-Methylnaphthalene                    | ND     | 0.00355   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| 2-Methylnaphthalene                    | ND     | 0.00355   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |
| Acetone                                | 0.0136 | 0.00888   |      | mg/Kg-dry     | 1  | 9/29/2014 2:37:29 PM | 15569 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (0-0.5)

**Project:** Group 9

**Collection Date:** 9/26/2014 9:45:00 AM

**Lab ID:** 1409E14-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Bromodichloromethane                   | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Bromoform                              | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Bromomethane                           | ND     | 0.00266 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 2-Butanone                             | ND     | 0.00888 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Carbon tetrachloride                   | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Chlorobenzene                          | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Chloroethane                           | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Chloroform                             | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Chloromethane                          | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 2-Chlorotoluene                        | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Carbon disulfide                       | ND     | 0.00888 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 4-Chlorotoluene                        | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| cis-1,2-DCE                            | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| cis-1,3-Dichloropropene                | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Dibromochloromethane                   | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Dibromomethane                         | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 1,2-Dichlorobenzene                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 1,3-Dichlorobenzene                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 1,4-Dichlorobenzene                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Dichlorodifluoromethane                | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 1,1-Dichloroethane                     | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 1,1-Dichloroethene                     | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 1,2-Dichloropropane                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 1,3-Dichloropropane                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 2,2-Dichloropropane                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 1,1-Dichloropropene                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Hexachlorobutadiene                    | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Isopropylbenzene                       | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 4-Isopropyltoluene                     | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Methylene chloride                     | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| n-Butylbenzene                         | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 2-Hexanone                             | ND     | 0.00888 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| n-Propylbenzene                        | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| sec-Butylbenzene                       | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| Styrene                                | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| 4-Methyl-2-pentanone                   | ND     | 0.00888 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |
| tert-Butylbenzene                      | ND     | 0.00178 |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569         |

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

|                    |                                                   |                                                      |              |
|--------------------|---------------------------------------------------|------------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    | Page 5 of 38 |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |              |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |              |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |              |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |              |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |              |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E14**

Date Reported: **1/6/2015**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (0-0.5)

**Project:** Group 9

**Collection Date:** 9/26/2014 9:45:00 AM

**Lab ID:** 1409E14-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| Tetrachloroethene (PCE)                | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| trans-1,2-DCE                          | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| trans-1,3-Dichloropropene              | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| 1,1,1-Trichloroethane                  | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| 1,1,2-Trichloroethane                  | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| Trichloroethene (TCE)                  | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| Trichlorofluoromethane                 | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| 1,2,3-Trichloropropane                 | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| Vinyl chloride                         | ND     | 0.00178  |      | mg/Kg-dry | 1  | 9/29/2014 2:37:29 PM | 15569                |
| Surr: 1,2-Dichloroethane-d4            | 121    | 70-130   |      | %REC      | 1  | 9/29/2014 2:37:29 PM | 15569                |
| Surr: 4-Bromofluorobenzene             | 100    | 65.3-135 |      | %REC      | 1  | 9/29/2014 2:37:29 PM | 15569                |
| Surr: Dibromofluoromethane             | 106    | 70-130   |      | %REC      | 1  | 9/29/2014 2:37:29 PM | 15569                |
| Surr: Toluene-d8                       | 101    | 70-130   |      | %REC      | 1  | 9/29/2014 2:37:29 PM | 15569                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E14**

Date Reported: **1/6/2015**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (0.5-2')

**Project:** Group 9

**Collection Date:** 9/26/2014 9:55:00 AM

**Lab ID:** 1409E14-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 1300   | 110      |      | mg/Kg-dry | 10 | 9/30/2014 7:29:41 PM  | 15573                |
| Motor Oil Range Organics (MRO)                 | 1400   | 570      |      | mg/Kg-dry | 10 | 9/30/2014 7:29:41 PM  | 15573                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/30/2014 7:29:41 PM  | 15573                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 65     | 4.1      |      | mg/Kg-dry | 1  | 9/29/2014 11:10:18 PM | R21528               |
| Surr: BFB                                      | 492    | 80-120   | S    | %REC      | 1  | 9/29/2014 11:10:18 PM | R21528               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 14     | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.088  | 0.036    |      | mg/Kg-dry | 1  | 10/7/2014 1:12:36 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Arsenic                                        | 3.4    | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Barium                                         | 210    | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Beryllium                                      | 0.58   | 0.17     |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Chromium                                       | 8.0    | 0.34     |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Cobalt                                         | 5.0    | 0.34     |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Lead                                           | 5.7    | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Nickel                                         | 8.0    | 0.56     |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Vanadium                                       | 29     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| Zinc                                           | 38     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:16:44 PM  | 15704                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |
| Aniline                                        | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |
| Anthracene                                     | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |
| Azobenzene                                     | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM  | 15576                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (0.5-2')

**Project:** Group 9

**Collection Date:** 9/26/2014 9:55:00 AM

**Lab ID:** 1409E14-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Carbazole                              | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Chrysene                               | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.91 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Dibenzofuran                           | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.91 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.68 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Fluoranthene                           | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Fluorene                               | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Hexachloroethane                       | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 7:40:04 PM | 15576        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (0.5-2')

**Project:** Group 9

**Collection Date:** 9/26/2014 9:55:00 AM

**Lab ID:** 1409E14-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units        | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|-----------|------|--------------|----|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC |    |                      |       |
| 2-Methylphenol                         | ND     | 1.1       |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| 3+4-Methylphenol                       | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| N-Nitrosodi-n-propylamine              | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| N-Nitrosodiphenylamine                 | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Naphthalene                            | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| 2-Nitroaniline                         | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| 3-Nitroaniline                         | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| 4-Nitroaniline                         | ND     | 0.91      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Nitrobenzene                           | ND     | 1.1       |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| 2-Nitrophenol                          | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| 4-Nitrophenol                          | ND     | 0.57      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Pentachlorophenol                      | ND     | 0.91      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Phenanthrene                           | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Phenol                                 | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Pyrene                                 | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Pyridine                               | ND     | 1.1       |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| 2,4,5-Trichlorophenol                  | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| 2,4,6-Trichlorophenol                  | ND     | 0.46      |      | mg/Kg-dry    | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Surr: 2-Fluorophenol                   | 60.9   | 21-111    |      | %REC         | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Surr: Phenol-d5                        | 66.7   | 23.1-117  |      | %REC         | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Surr: 2,4,6-Tribromophenol             | 66.9   | 22.7-88.9 |      | %REC         | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Surr: Nitrobenzene-d5                  | 73.0   | 24.5-126  |      | %REC         | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Surr: 2-Fluorobiphenyl                 | 68.7   | 21.2-129  |      | %REC         | 1  | 10/1/2014 7:40:04 PM | 15576 |
| Surr: 4-Terphenyl-d14                  | 70.8   | 39.4-107  |      | %REC         | 1  | 10/1/2014 7:40:04 PM | 15576 |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      | Analyst: RAA |    |                      |       |
| Benzene                                | 0.041  | 0.041     |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| Toluene                                | ND     | 0.041     |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| Ethylbenzene                           | 0.31   | 0.041     |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.041     |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| 1,2,4-Trimethylbenzene                 | 0.30   | 0.041     |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| 1,3,5-Trimethylbenzene                 | 0.16   | 0.041     |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.041     |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.041     |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| Naphthalene                            | ND     | 0.081     |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| 1-Methylnaphthalene                    | ND     | 0.16      |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| 2-Methylnaphthalene                    | ND     | 0.16      |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| Acetone                                | ND     | 0.61      |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |
| Bromobenzene                           | ND     | 0.041     |      | mg/Kg-dry    | 1  | 10/2/2014 3:11:41 AM | 15572 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (0.5-2')

**Project:** Group 9

**Collection Date:** 9/26/2014 9:55:00 AM

**Lab ID:** 1409E14-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|-------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Bromoform                          | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Bromomethane                       | ND     | 0.12  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 2-Butanone                         | ND     | 0.41  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Carbon disulfide                   | ND     | 0.41  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Carbon tetrachloride               | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Chlorobenzene                      | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Chloroethane                       | ND     | 0.081 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Chloroform                         | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Chloromethane                      | ND     | 0.12  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 2-Chlorotoluene                    | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 4-Chlorotoluene                    | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| cis-1,2-DCE                        | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| cis-1,3-Dichloropropene            | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.081 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Dibromochloromethane               | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Dibromomethane                     | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 1,2-Dichlorobenzene                | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 1,3-Dichlorobenzene                | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 1,4-Dichlorobenzene                | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Dichlorodifluoromethane            | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 1,1-Dichloroethane                 | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 1,1-Dichloroethene                 | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 1,2-Dichloropropane                | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 1,3-Dichloropropane                | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 2,2-Dichloropropane                | ND     | 0.081 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 1,1-Dichloropropene                | ND     | 0.081 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Hexachlorobutadiene                | ND     | 0.081 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 2-Hexanone                         | ND     | 0.41  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Isopropylbenzene                   | 0.065  | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 4-Isopropyltoluene                 | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 4-Methyl-2-pentanone               | ND     | 0.41  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Methylene chloride                 | ND     | 0.12  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| n-Butylbenzene                     | ND     | 0.12  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| n-Propylbenzene                    | 0.19   | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| sec-Butylbenzene                   | 0.070  | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| Styrene                            | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| tert-Butylbenzene                  | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.041 |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E14**

Date Reported: **1/6/2015**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (0.5-2')

**Project:** Group 9

**Collection Date:** 9/26/2014 9:55:00 AM

**Lab ID:** 1409E14-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.041  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| Tetrachloroethene (PCE)            | ND     | 0.041  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| trans-1,2-DCE                      | ND     | 0.041  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| trans-1,3-Dichloropropene          | ND     | 0.041  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| 1,2,3-Trichlorobenzene             | ND     | 0.081  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| 1,2,4-Trichlorobenzene             | ND     | 0.041  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| 1,1,1-Trichloroethane              | ND     | 0.041  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| 1,1,2-Trichloroethane              | ND     | 0.041  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| Trichloroethene (TCE)              | ND     | 0.041  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| Trichlorofluoromethane             | ND     | 0.041  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| 1,2,3-Trichloropropane             | ND     | 0.081  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| Vinyl chloride                     | ND     | 0.041  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| Xylenes, Total                     | 0.90   | 0.081  |      | mg/Kg-dry | 1  | 10/2/2014 3:11:41 AM | 15572               |
| Surr: Dibromofluoromethane         | 79.0   | 70-130 |      | %REC      | 1  | 10/2/2014 3:11:41 AM | 15572               |
| Surr: 1,2-Dichloroethane-d4        | 86.1   | 70-130 |      | %REC      | 1  | 10/2/2014 3:11:41 AM | 15572               |
| Surr: Toluene-d8                   | 93.3   | 70-130 |      | %REC      | 1  | 10/2/2014 3:11:41 AM | 15572               |
| Surr: 4-Bromofluorobenzene         | 92.6   | 70-130 |      | %REC      | 1  | 10/2/2014 3:11:41 AM | 15572               |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E14**

Date Reported: **1/6/2015**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (22-24')

**Project:** Group 9

**Collection Date:** 9/26/2014 10:10:00 AM

**Lab ID:** 1409E14-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 1300   | 100      |      | mg/Kg-dry | 10 | 10/1/2014 1:50:39 PM  | 15573                |
| Motor Oil Range Organics (MRO)                 | ND     | 520      |      | mg/Kg-dry | 10 | 10/1/2014 1:50:39 PM  | 15573                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 10/1/2014 1:50:39 PM  | 15573                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 38     | 20       |      | mg/Kg-dry | 5  | 9/29/2014 11:40:20 PM | R21528               |
| Surr: BFB                                      | 156    | 80-120   | S    | %REC      | 5  | 9/29/2014 11:40:20 PM | R21528               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 3.6    | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.034    |      | mg/Kg-dry | 1  | 10/7/2014 1:14:27 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Barium                                         | 130    | 0.10     |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Chromium                                       | 3.3    | 0.30     |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Cobalt                                         | 2.2    | 0.30     |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Lead                                           | 2.8    | 0.25     |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Nickel                                         | 1.8    | 0.51     |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Vanadium                                       | 13     | 2.5      |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| Zinc                                           | 12     | 2.5      |      | mg/Kg-dry | 1  | 10/4/2014 1:18:00 PM  | 15704                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM  | 15576                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (22-24')

**Project:** Group 9

**Collection Date:** 9/26/2014 10:10:00 AM

**Lab ID:** 1409E14-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF           | Date Analyzed        | Batch |
|----------------------------------------|--------|------|------|-----------|--------------|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           | Analyst: JDC |                      |       |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Fluorene                               | 0.33   | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 1-Methylnaphthalene                    | 3.3    | 0.21 |      | mg/Kg-dry | 1            | 10/1/2014 9:04:34 PM | 15576 |
| 2-Methylnaphthalene                    | 6.1    | 0.42 |      | mg/Kg-dry | 2            | 10/2/2014 3:29:16 PM | 15576 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (22-24')

**Project:** Group 9

**Collection Date:** 9/26/2014 10:10:00 AM

**Lab ID:** 1409E14-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Naphthalene                            | 1.2    | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Phenanthrene                           | 0.55   | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Surr: 2-Fluorophenol                   | 71.1   | 21-111    |      | %REC      | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Surr: Phenol-d5                        | 81.6   | 23.1-117  |      | %REC      | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Surr: 2,4,6-Tribromophenol             | 79.0   | 22.7-88.9 |      | %REC      | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Surr: Nitrobenzene-d5                  | 94.0   | 24.5-126  |      | %REC      | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Surr: 2-Fluorobiphenyl                 | 76.7   | 21.2-129  |      | %REC      | 1  | 10/1/2014 9:04:34 PM | 15576        |
| Surr: 4-Terphenyl-d14                  | 83.4   | 39.4-107  |      | %REC      | 1  | 10/1/2014 9:04:34 PM | 15576        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.20      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Toluene                                | ND     | 0.20      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Ethylbenzene                           | 0.22   | 0.20      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.20      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.20      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.20      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.20      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.20      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Naphthalene                            | 1.6    | 0.41      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1-Methylnaphthalene                    | 4.2    | 0.81      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 2-Methylnaphthalene                    | 7.9    | 0.81      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Acetone                                | ND     | 3.0       |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Bromobenzene                           | ND     | 0.20      |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-8 (22-24')

Project: Group 9

Collection Date: 9/26/2014 10:10:00 AM

Lab ID: 1409E14-003

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Bromoform                          | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Bromomethane                       | ND     | 0.61 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 2-Butanone                         | ND     | 2.0  |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Carbon disulfide                   | ND     | 2.0  |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Carbon tetrachloride               | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Chlorobenzene                      | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Chloroethane                       | ND     | 0.41 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Chloroform                         | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Chloromethane                      | ND     | 0.61 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 2-Chlorotoluene                    | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 4-Chlorotoluene                    | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| cis-1,2-DCE                        | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| cis-1,3-Dichloropropene            | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.41 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Dibromochloromethane               | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Dibromomethane                     | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,2-Dichlorobenzene                | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,3-Dichlorobenzene                | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,4-Dichlorobenzene                | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Dichlorodifluoromethane            | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,1-Dichloroethane                 | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,1-Dichloroethene                 | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,2-Dichloropropane                | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,3-Dichloropropane                | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 2,2-Dichloropropane                | ND     | 0.41 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,1-Dichloropropene                | ND     | 0.41 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Hexachlorobutadiene                | ND     | 0.41 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 2-Hexanone                         | ND     | 2.0  |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Isopropylbenzene                   | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 4-Isopropyltoluene                 | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 4-Methyl-2-pentanone               | ND     | 2.0  |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Methylene chloride                 | ND     | 0.61 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| n-Butylbenzene                     | ND     | 0.61 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| n-Propylbenzene                    | 0.40   | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| sec-Butylbenzene                   | 0.21   | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Styrene                            | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| tert-Butylbenzene                  | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.20 |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (22-24')

**Project:** Group 9

**Collection Date:** 9/26/2014 10:10:00 AM

**Lab ID:** 1409E14-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|--------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: RAA |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.20   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Tetrachloroethene (PCE)            | ND     | 0.20   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| trans-1,2-DCE                      | ND     | 0.20   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| trans-1,3-Dichloropropene          | ND     | 0.20   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,2,3-Trichlorobenzene             | ND     | 0.41   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,2,4-Trichlorobenzene             | ND     | 0.20   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,1,1-Trichloroethane              | ND     | 0.20   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,1,2-Trichloroethane              | ND     | 0.20   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Trichloroethene (TCE)              | ND     | 0.20   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Trichlorofluoromethane             | ND     | 0.20   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| 1,2,3-Trichloropropane             | ND     | 0.41   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Vinyl chloride                     | ND     | 0.20   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Xylenes, Total                     | ND     | 0.41   |      | mg/Kg-dry | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Surr: Dibromofluoromethane         | 84.3   | 70-130 |      | %REC      | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Surr: 1,2-Dichloroethane-d4        | 87.6   | 70-130 |      | %REC      | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Surr: Toluene-d8                   | 90.3   | 70-130 |      | %REC      | 5  | 10/2/2014 3:39:32 AM | 15572        |
| Surr: 4-Bromofluorobenzene         | 122    | 70-130 |      | %REC      | 5  | 10/2/2014 3:39:32 AM | 15572        |

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

**Qualifiers:**

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E14**

Date Reported: **1/6/2015**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (24-26')

**Project:** Group 9

**Collection Date:** 9/26/2014 10:20:00 AM

**Lab ID:** 1409E14-004

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 4100   | 110      |      | mg/Kg-dry | 10 | 10/1/2014 2:20:24 PM  | 15573                |
| Motor Oil Range Organics (MRO)                 | ND     | 530      |      | mg/Kg-dry | 10 | 10/1/2014 2:20:24 PM  | 15573                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 10/1/2014 2:20:24 PM  | 15573                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 350    | 50       |      | mg/Kg-dry | 10 | 9/30/2014 3:54:43 PM  | 15572                |
| Surr: BFB                                      | 261    | 80-120   | S    | %REC      | 10 | 9/30/2014 3:54:43 PM  | 15572                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 5.5    | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.035    |      | mg/Kg-dry | 1  | 10/7/2014 1:16:14 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Arsenic                                        | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Barium                                         | 140    | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Beryllium                                      | 0.18   | 0.16     |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Chromium                                       | 12     | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Cobalt                                         | 3.2    | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Lead                                           | 4.3    | 0.27     |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Nickel                                         | 5.3    | 0.55     |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Vanadium                                       | 17     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| Zinc                                           | 15     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 1:23:13 PM  | 15704                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |
| Benzoic acid                                   | ND     | 0.53     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM  | 15576                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E14**

Date Reported: **1/6/2015**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (24-26')

**Project:** Group 9

**Collection Date:** 9/26/2014 10:20:00 AM

**Lab ID:** 1409E14-004

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 4-Chloroaniline                        | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.27 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.27 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.32 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Fluorene                               | 1.1    | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Isophorone                             | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 1-Methylnaphthalene                    | 10     | 1.1  |      | mg/Kg-dry | 5  | 10/2/2014 3:57:17 PM | 15576        |
| 2-Methylnaphthalene                    | 17     | 1.1  |      | mg/Kg-dry | 5  | 10/2/2014 3:57:17 PM | 15576        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (24-26')

**Project:** Group 9

**Collection Date:** 9/26/2014 10:20:00 AM

**Lab ID:** 1409E14-004

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.53      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Naphthalene                            | 4.0    | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 4-Nitroaniline                         | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Nitrobenzene                           | ND     | 0.53      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 4-Nitrophenol                          | ND     | 0.27      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Pentachlorophenol                      | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Phenanthrene                           | 1.2    | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Pyridine                               | ND     | 0.53      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Surr: 2-Fluorophenol                   | 39.3   | 21-111    |      | %REC      | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Surr: Phenol-d5                        | 46.7   | 23.1-117  |      | %REC      | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Surr: 2,4,6-Tribromophenol             | 52.1   | 22.7-88.9 |      | %REC      | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Surr: Nitrobenzene-d5                  | 74.4   | 24.5-126  |      | %REC      | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Surr: 2-Fluorobiphenyl                 | 53.8   | 21.2-129  |      | %REC      | 1  | 10/1/2014 9:32:45 PM | 15576        |
| Surr: 4-Terphenyl-d14                  | 67.9   | 39.4-107  |      | %REC      | 1  | 10/1/2014 9:32:45 PM | 15576        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | 0.77   | 0.50      |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| Toluene                                | ND     | 0.50      |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| Ethylbenzene                           | 5.6    | 0.50      |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.50      |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| 1,2,4-Trimethylbenzene                 | 0.74   | 0.50      |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.50      |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.50      |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.50      |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| Naphthalene                            | 8.6    | 0.99      |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| 1-Methylnaphthalene                    | 15     | 2.0       |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| 2-Methylnaphthalene                    | 29     | 2.0       |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| Acetone                                | ND     | 7.5       |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |
| Bromobenzene                           | ND     | 0.50      |      | mg/Kg-dry | 10 | 10/2/2014 4:07:32 AM | 15572        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (24-26')

**Project:** Group 9

**Collection Date:** 9/26/2014 10:20:00 AM

**Lab ID:** 1409E14-004

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL   | Qual | Units        | DF | Date Analyzed        | Batch |
|------------------------------------|--------|------|------|--------------|----|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      | Analyst: RAA |    |                      |       |
| Bromodichloromethane               | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Bromoform                          | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Bromomethane                       | ND     | 1.5  |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 2-Butanone                         | ND     | 5.0  |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Carbon disulfide                   | ND     | 5.0  |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Carbon tetrachloride               | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Chlorobenzene                      | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Chloroethane                       | ND     | 0.99 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Chloroform                         | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Chloromethane                      | ND     | 1.5  |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 2-Chlorotoluene                    | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 4-Chlorotoluene                    | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| cis-1,2-DCE                        | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| cis-1,3-Dichloropropene            | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.99 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Dibromochloromethane               | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Dibromomethane                     | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 1,2-Dichlorobenzene                | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 1,3-Dichlorobenzene                | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 1,4-Dichlorobenzene                | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Dichlorodifluoromethane            | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 1,1-Dichloroethane                 | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 1,1-Dichloroethene                 | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 1,2-Dichloropropane                | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 1,3-Dichloropropane                | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 2,2-Dichloropropane                | ND     | 0.99 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 1,1-Dichloropropene                | ND     | 0.99 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Hexachlorobutadiene                | ND     | 0.99 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 2-Hexanone                         | ND     | 5.0  |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Isopropylbenzene                   | 1.5    | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 4-Isopropyltoluene                 | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 4-Methyl-2-pentanone               | ND     | 5.0  |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Methylene chloride                 | ND     | 1.5  |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| n-Butylbenzene                     | ND     | 1.5  |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| n-Propylbenzene                    | 4.4    | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| sec-Butylbenzene                   | 1.5    | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| Styrene                            | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| tert-Butylbenzene                  | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.50 |      | mg/Kg-dry    | 10 | 10/2/2014 4:07:32 AM | 15572 |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 20 of 38 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E14

Date Reported: 1/6/2015

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-8 (24-26')

**Project:** Group 9

**Collection Date:** 9/26/2014 10:20:00 AM

**Lab ID:** 1409E14-004

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF                  | Date Analyzed        | Batch |
|------------------------------------|--------|--------|------|-----------|---------------------|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           | Analyst: <b>RAA</b> |                      |       |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.50   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| Tetrachloroethene (PCE)            | ND     | 0.50   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| trans-1,2-DCE                      | ND     | 0.50   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| trans-1,3-Dichloropropene          | ND     | 0.50   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| 1,2,3-Trichlorobenzene             | ND     | 0.99   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| 1,2,4-Trichlorobenzene             | ND     | 0.50   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| 1,1,1-Trichloroethane              | ND     | 0.50   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| 1,1,2-Trichloroethane              | ND     | 0.50   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| Trichloroethene (TCE)              | ND     | 0.50   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| Trichlorofluoromethane             | ND     | 0.50   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| 1,2,3-Trichloropropane             | ND     | 0.99   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| Vinyl chloride                     | ND     | 0.50   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| Xylenes, Total                     | 11     | 0.99   |      | mg/Kg-dry | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| Surr: Dibromofluoromethane         | 77.4   | 70-130 |      | %REC      | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| Surr: 1,2-Dichloroethane-d4        | 80.4   | 70-130 |      | %REC      | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| Surr: Toluene-d8                   | 89.4   | 70-130 |      | %REC      | 10                  | 10/2/2014 4:07:32 AM | 15572 |
| Surr: 4-Bromofluorobenzene         | 124    | 70-130 |      | %REC      | 10                  | 10/2/2014 4:07:32 AM | 15572 |

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

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

# Anatek Labs, Inc.

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

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

**Batch #:** 140930030  
**Project Name:** 1409E14

## Analytical Results Report

**Sample Number** 140930030-001 **Sampling Date** 9/26/2014 **Date/Time Received** 9/30/2014 12:05 PM  
**Client Sample ID** 1409E14-001C / SWMU 13-8 (0-0.5') **Sampling Time** 9:45 AM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.239 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 2      | Percent |       | 10/1/2014     | KJS     | %moisture |           |

**Sample Number** 140930030-002 **Sampling Date** 9/26/2014 **Date/Time Received** 9/30/2014 12:05 PM  
**Client Sample ID** 1409E14-002C / SWMU 13-8 (0.5-2') **Sampling Time** 9:55 AM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.276 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 10.7   | Percent |       | 10/1/2014     | KJS     | %moisture |           |

**Sample Number** 140930030-003 **Sampling Date** 9/26/2014 **Date/Time Received** 9/30/2014 12:05 PM  
**Client Sample ID** 1409E14-003C / SWMU 13-8 (22-24') **Sampling Time** 10:10 AM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.225 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 3.3    | Percent |       | 10/1/2014     | KJS     | %moisture |           |

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

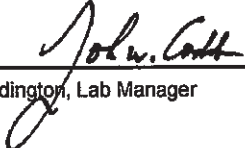
**Batch #:** 140930030  
**Project Name:** 1409E14

## Analytical Results Report

|                         |                                   |                        |           |                           |                    |
|-------------------------|-----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930030-004                     | <b>Sampling Date</b>   | 9/26/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E14-004B / SWMU 13-8 (24-26') | <b>Sampling Time</b>   | 10:20 AM  |                           |                    |
| <b>Matrix</b>           | Soil                              | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                   |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.254 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 5.2    | Percent |       | 10/1/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

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

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

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

**Batch #:** 140930030  
**Project Name:** 1409E14

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|-----------|---------------|
| Cyanide   | 0.527      | mg/kg | 0.5       | 105.4 | 90-110  | 10/7/2014 | 10/7/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|------|---------|-----------|---------------|
| 140930030-004 | Cyanide   | ND            | 12.1      | mg/kg | 12.7     | 95.3 | 90-110  | 10/7/2014 | 10/7/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 11.9       | mg/kg | 12.7      | 93.7 | 1.7  | 0-25    | 10/7/2014 | 10/7/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/7/2014 | 10/7/2014     |

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

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00168; ID:WA00168; WA:C595; MT:Cert0095; FL(NELAP): E871099

Thursday, October 16, 2014

Page 1 of 1

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|                                |           |     |                          |             |                                                   |          |              |      |          |      |
|--------------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | MB-15573  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                     | PBS       |     | Batch ID: 15573          |             | RunNo: 21539                                      |          |              |      |          |      |
| Prep Date:                     | 9/29/2014 |     | Analysis Date: 9/30/2014 |             | SeqNo: 630649                                     |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10  |                          |             |                                                   |          |              |      |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50  |                          |             |                                                   |          |              |      |          |      |
| Surr: DNOP                     | 11        |     | 10.00                    |             | 106                                               | 57.9     | 140          |      |          |      |

|                             |           |     |                          |             |                                                   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15573 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 15573          |             | RunNo: 21539                                      |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |     | Analysis Date: 9/30/2014 |             | SeqNo: 630650                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 47        | 10  | 50.00                    | 0           | 94.9                                              | 68.6     | 130          |      |          |      |
| Surr: DNOP                  | 4.8       |     | 5.000                    |             | 96.0                                              | 57.9     | 140          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

**Client:** Western Refining Southwest, Inc.

**Project:** Group 9

| Sample ID <b>B27</b>          | SampType: <b>MBLK</b>           |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|---------------------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21528</b>         |     |           |             | RunNo: <b>21528</b>                               |                     |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/29/2014</b> |     |           |             | SeqNo: <b>630004</b>                              | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |             |                                                   |                     |           |      |          |      |
| Surr: BFB                     | 880                             |     | 1000      |             | 87.8                                              | 80                  | 120       |      |          |      |

| Sample ID <b>2.5UG GRO LCS-II</b> | SampType: <b>LCS</b>            |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                     |           |      |          |      |
|-----------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|---------------------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>            | Batch ID: <b>R21528</b>         |     |           |             | RunNo: <b>21528</b>                               |                     |           |      |          |      |
| Prep Date:                        | Analysis Date: <b>9/29/2014</b> |     |           |             | SeqNo: <b>630005</b>                              | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                           | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)     | 23                              | 5.0 | 25.00     | 0           | 92.0                                              | 65.8                | 139       |      |          |      |
| Surr: BFB                         | 980                             |     | 1000      |             | 98.1                                              | 80                  | 120       |      |          |      |

| Sample ID <b>1409E14-001AMS</b>     | SampType: <b>MS</b>             |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                         |           |      |          |      |
|-------------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|-------------------------|-----------|------|----------|------|
| Client ID: <b>SWMU 13-8 (0-0.5)</b> | Batch ID: <b>R21528</b>         |     |           |             | RunNo: <b>21528</b>                               |                         |           |      |          |      |
| Prep Date:                          | Analysis Date: <b>9/29/2014</b> |     |           |             | SeqNo: <b>630007</b>                              | Units: <b>mg/Kg-dry</b> |           |      |          |      |
| Analyte                             | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit                | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)       | 15                              | 3.4 | 16.94     | 0           | 87.1                                              | 71.8                    | 132       |      |          |      |
| Surr: BFB                           | 620                             |     | 677.6     |             | 91.5                                              | 80                      | 120       |      |          |      |

| Sample ID <b>1409E14-001AMSD</b>    | SampType: <b>MSD</b>            |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                         |           |      |          |      |
|-------------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|-------------------------|-----------|------|----------|------|
| Client ID: <b>SWMU 13-8 (0-0.5)</b> | Batch ID: <b>R21528</b>         |     |           |             | RunNo: <b>21528</b>                               |                         |           |      |          |      |
| Prep Date:                          | Analysis Date: <b>9/29/2014</b> |     |           |             | SeqNo: <b>630008</b>                              | Units: <b>mg/Kg-dry</b> |           |      |          |      |
| Analyte                             | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit                | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)       | 15                              | 3.4 | 16.94     | 0           | 85.7                                              | 71.8                    | 132       | 1.57 | 20       |      |
| Surr: BFB                           | 670                             |     | 677.6     |             | 98.6                                              | 80                      | 120       | 0    | 0        |      |

| Sample ID <b>MB-15572</b>     | SampType: <b>MBLK</b>           |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|---------------------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>15572</b>          |     |           |             | RunNo: <b>21540</b>                               |                     |           |      |          |      |
| Prep Date: <b>9/29/2014</b>   | Analysis Date: <b>9/30/2014</b> |     |           |             | SeqNo: <b>631089</b>                              | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |             |                                                   |                     |           |      |          |      |
| Surr: BFB                     | 890                             |     | 1000      |             | 88.9                                              | 80                  | 120       |      |          |      |

| Sample ID <b>LCS-15572</b>  | SampType: <b>LCS</b>            |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |                     |           |      |          |      |
|-----------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|---------------------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>      | Batch ID: <b>15572</b>          |     |           |             | RunNo: <b>21540</b>                               |                     |           |      |          |      |
| Prep Date: <b>9/29/2014</b> | Analysis Date: <b>9/30/2014</b> |     |           |             | SeqNo: <b>631090</b>                              | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                     | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |

### Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|                               |           |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|-----------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | LCS-15572 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS      |     | Batch ID: 15572          |             | RunNo: 21540                               |          |              |      |          |      |
| Prep Date:                    | 9/29/2014 |     | Analysis Date: 9/30/2014 |             | SeqNo: 631090                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result    | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 28        | 5.0 | 25.00                    | 0           | 112                                        | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 970       |     | 1000                     |             | 97.0                                       | 80       | 120          |      |          |      |

|                               |        |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|--------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | B26    |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | PBS    |     | Batch ID: R21557         |             | RunNo: 21557                               |          |              |      |          |      |
| Prep Date:                    |        |     | Analysis Date: 9/30/2014 |             | SeqNo: 631187                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND     | 5.0 |                          |             |                                            |          |              |      |          |      |
| Surr: BFB                     | 900    |     | 1000                     |             | 89.6                                       | 80       | 120          |      |          |      |

|                               |               |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|---------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS          |     | Batch ID: R21557         |             | RunNo: 21557                               |          |              |      |          |      |
| Prep Date:                    |               |     | Analysis Date: 9/30/2014 |             | SeqNo: 631188                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result        | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 23            | 5.0 | 25.00                    | 0           | 91.8                                       | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 980           |     | 1000                     |             | 97.6                                       | 80       | 120          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|                                |           |       |                          |             |      |                                       |           |              |          |      |
|--------------------------------|-----------|-------|--------------------------|-------------|------|---------------------------------------|-----------|--------------|----------|------|
| Sample ID                      | mb-15572  |       | SampType: MBLK           |             |      | TestCode: EPA Method 8260B: Volatiles |           |              |          |      |
| Client ID:                     | PBS       |       | Batch ID: 15572          |             |      | RunNo: 21567                          |           |              |          |      |
| Prep Date:                     | 9/29/2014 |       | Analysis Date: 10/1/2014 |             |      | SeqNo: 632097                         |           | Units: mg/Kg |          |      |
| Analyte                        | Result    | PQL   | SPK value                | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD         | RPDLimit | Qual |
| Benzene                        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Toluene                        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Ethylbenzene                   | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Naphthalene                    | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |
| 1-Methylnaphthalene            | ND        | 0.20  |                          |             |      |                                       |           |              |          |      |
| 2-Methylnaphthalene            | ND        | 0.20  |                          |             |      |                                       |           |              |          |      |
| Acetone                        | ND        | 0.75  |                          |             |      |                                       |           |              |          |      |
| Bromobenzene                   | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Bromodichloromethane           | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Bromoform                      | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Bromomethane                   | ND        | 0.15  |                          |             |      |                                       |           |              |          |      |
| 2-Butanone                     | ND        | 0.50  |                          |             |      |                                       |           |              |          |      |
| Carbon disulfide               | ND        | 0.50  |                          |             |      |                                       |           |              |          |      |
| Carbon tetrachloride           | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Chlorobenzene                  | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Chloroethane                   | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |
| Chloroform                     | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Chloromethane                  | ND        | 0.15  |                          |             |      |                                       |           |              |          |      |
| 2-Chlorotoluene                | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 4-Chlorotoluene                | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| cis-1,2-DCE                    | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |
| Dibromochloromethane           | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Dibromomethane                 | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| Dichlorodifluoromethane        | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,1-Dichloroethane             | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,1-Dichloroethene             | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,2-Dichloropropane            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 1,3-Dichloropropane            | ND        | 0.050 |                          |             |      |                                       |           |              |          |      |
| 2,2-Dichloropropane            | ND        | 0.10  |                          |             |      |                                       |           |              |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|                             |                  |       |                |                  |      |           |                                    |      |                     |      |
|-----------------------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID                   | <b>mb-15572</b>  |       | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:                  | <b>PBS</b>       |       | Batch ID:      | <b>15572</b>     |      | RunNo:    | <b>21567</b>                       |      |                     |      |
| Prep Date:                  | <b>9/29/2014</b> |       | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632097</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| 1,1-Dichloropropene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 2-Hexanone                  | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Isopropylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Methylene chloride          | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Butylbenzene              | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Propylbenzene             | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| sec-Butylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Styrene                     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| tert-Butylbenzene           | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,2-DCE               | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Vinyl chloride              | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Xylenes, Total              | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.39             |       | 0.5000         |                  | 78.6 | 70        | 130                                |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.39             |       | 0.5000         |                  | 78.3 | 70        | 130                                |      |                     |      |
| Surr: Toluene-d8            | 0.45             |       | 0.5000         |                  | 89.7 | 70        | 130                                |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.43             |       | 0.5000         |                  | 85.4 | 70        | 130                                |      |                     |      |

|               |                  |       |                |                  |      |           |                                    |      |                     |      |
|---------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID     | <b>lcs-15572</b> |       | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:    | <b>LCSS</b>      |       | Batch ID:      | <b>15572</b>     |      | RunNo:    | <b>21567</b>                       |      |                     |      |
| Prep Date:    | <b>9/29/2014</b> |       | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632098</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| Benzene       | 0.95             | 0.050 | 1.000          | 0                | 95.1 | 70        | 130                                |      |                     |      |
| Toluene       | 0.96             | 0.050 | 1.000          | 0                | 96.3 | 70        | 130                                |      |                     |      |
| Chlorobenzene | 0.92             | 0.050 | 1.000          | 0                | 92.5 | 70        | 130                                |      |                     |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|                             |           |       |                          |             |      |                                       |           |              |          |      |
|-----------------------------|-----------|-------|--------------------------|-------------|------|---------------------------------------|-----------|--------------|----------|------|
| Sample ID                   | lcs-15572 |       | SampType: LCS            |             |      | TestCode: EPA Method 8260B: Volatiles |           |              |          |      |
| Client ID:                  | LCSS      |       | Batch ID: 15572          |             |      | RunNo: 21567                          |           |              |          |      |
| Prep Date:                  | 9/29/2014 |       | Analysis Date: 10/1/2014 |             |      | SeqNo: 632098                         |           | Units: mg/Kg |          |      |
| Analyte                     | Result    | PQL   | SPK value                | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD         | RPDLimit | Qual |
| 1,1-Dichloroethene          | 1.0       | 0.050 | 1.000                    | 0           | 101  | 60.5                                  | 160       |              |          |      |
| Trichloroethene (TCE)       | 0.94      | 0.050 | 1.000                    | 0           | 93.5 | 58.8                                  | 139       |              |          |      |
| Surr: Dibromofluoromethane  | 0.40      |       | 0.5000                   |             | 79.1 | 70                                    | 130       |              |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.39      |       | 0.5000                   |             | 77.7 | 70                                    | 130       |              |          |      |
| Surr: Toluene-d8            | 0.44      |       | 0.5000                   |             | 88.2 | 70                                    | 130       |              |          |      |
| Surr: 4-Bromofluorobenzene  | 0.42      |       | 0.5000                   |             | 85.0 | 70                                    | 130       |              |          |      |

### Qualifiers:

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E Value above quantitation range  
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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|                                |           |         |                          |             |                                           |          |              |      |          |      |
|--------------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15569  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                     | PBS       |         | Batch ID: 15569          |             | RunNo: 21530                              |          |              |      |          |      |
| Prep Date:                     | 9/29/2014 |         | Analysis Date: 9/29/2014 |             | SeqNo: 629909                             |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Toluene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Xylenes, Total                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| Acetone                        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromoform                      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromomethane                   | ND        | 0.00300 |                          |             |                                           |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroform                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloromethane                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15569  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | PBS       |         | Batch ID: 15569          |             | RunNo: 21530                              |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |         | Analysis Date: 9/29/2014 |             | SeqNo: 629909                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 2,2-Dichloropropane         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloropropene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Hexachlorobutadiene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Isopropylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Isopropyltoluene          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methylene chloride          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| n-Butylbenzene              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Hexanone                  | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| n-Propylbenzene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| sec-Butylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Styrene                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Methyl-2-pentanone        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| tert-Butylbenzene           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Tetrachloroethene (PCE)     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,2-DCE               | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,3-Dichloropropene   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichloroethene (TCE)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichlorofluoromethane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichloropropane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Vinyl chloride              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0201    |         | 0.02000                  |             | 100                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0230    |         | 0.02000                  |             | 115                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0204    |         | 0.02000                  |             | 102                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0202    |         | 0.02000                  |             | 101                                       | 70       | 130          |      |          |      |

|               |           |         |                          |             |                                           |          |              |      |          |      |
|---------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID     | ics-15569 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:    | LCSS      |         | Batch ID: 15569          |             | RunNo: 21530                              |          |              |      |          |      |
| Prep Date:    | 9/29/2014 |         | Analysis Date: 9/29/2014 |             | SeqNo: 629915                             |          | Units: mg/Kg |      |          |      |
| Analyte       | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene       | 0.0100    | 0.00200 | 0.01000                  | 0           | 100                                       | 70       | 130          |      |          |      |
| Toluene       | 0.00993   | 0.00200 | 0.01000                  | 0           | 99.3                                      | 70       | 130          |      |          |      |
| Chlorobenzene | 0.0100    | 0.00200 | 0.01000                  | 0           | 100                                       | 70       | 130          |      |          |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|                             |           |         |                          |             |      |                                           |           |              |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                   | lcs-15569 |         | SampType: LCS            |             |      | TestCode: Method 8260B/5035LOW: VOLATILES |           |              |          |      |
| Client ID:                  | LCSS      |         | Batch ID: 15569          |             |      | RunNo: 21530                              |           |              |          |      |
| Prep Date:                  | 9/29/2014 |         | Analysis Date: 9/29/2014 |             |      | SeqNo: 629915                             |           | Units: mg/Kg |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.00922   | 0.00200 | 0.01000                  | 0           | 92.2 | 70                                        | 130       |              |          |      |
| Trichloroethene (TCE)       | 0.00959   | 0.00200 | 0.01000                  | 0           | 95.9 | 61.6                                      | 131       |              |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0218    |         | 0.02000                  |             | 109  | 70                                        | 130       |              |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0224    |         | 0.02000                  |             | 112  | 65.3                                      | 135       |              |          |      |
| Surr: Dibromofluoromethane  | 0.0205    |         | 0.02000                  |             | 103  | 70                                        | 130       |              |          |      |
| Surr: Toluene-d8            | 0.0202    |         | 0.02000                  |             | 101  | 70                                        | 130       |              |          |      |

### Qualifiers:

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

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|                             |                  |      |                                 |             |                                                  |          |                     |      |          |      |
|-----------------------------|------------------|------|---------------------------------|-------------|--------------------------------------------------|----------|---------------------|------|----------|------|
| Sample ID                   | <b>mb-15576</b>  |      | SampType: <b>MBLK</b>           |             | TestCode: <b>EPA Method 8270C: Semivolatiles</b> |          |                     |      |          |      |
| Client ID:                  | <b>PBS</b>       |      | Batch ID: <b>15576</b>          |             | RunNo: <b>21591</b>                              |          |                     |      |          |      |
| Prep Date:                  | <b>9/29/2014</b> |      | Analysis Date: <b>10/1/2014</b> |             | SeqNo: <b>632834</b>                             |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                     | Result           | PQL  | SPK value                       | SPK Ref Val | %REC                                             | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Acenaphthylene              | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Aniline                     | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Anthracene                  | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Azobenzene                  | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benz(a)anthracene           | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benzo(a)pyrene              | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benzo(b)fluoranthene        | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benzo(g,h,i)perylene        | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benzo(k)fluoranthene        | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benzoic acid                | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| Benzyl alcohol              | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Bis(2-chloroethoxy)methane  | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Bis(2-chloroethyl)ether     | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Bis(2-chloroisopropyl)ether | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| 4-Bromophenyl phenyl ether  | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Butyl benzyl phthalate      | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Carbazole                   | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 4-Chloro-3-methylphenol     | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| 4-Chloroaniline             | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| 2-Chloronaphthalene         | ND               | 0.25 |                                 |             |                                                  |          |                     |      |          |      |
| 2-Chlorophenol              | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 4-Chlorophenyl phenyl ether | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Chrysene                    | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Di-n-butyl phthalate        | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| Di-n-octyl phthalate        | ND               | 0.40 |                                 |             |                                                  |          |                     |      |          |      |
| Dibenz(a,h)anthracene       | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Dibenzofuran                | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 1,2-Dichlorobenzene         | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 1,3-Dichlorobenzene         | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 1,4-Dichlorobenzene         | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 3,3'-Dichlorobenzidine      | ND               | 0.25 |                                 |             |                                                  |          |                     |      |          |      |
| Diethyl phthalate           | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Dimethyl phthalate          | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 2,4-Dichlorophenol          | ND               | 0.40 |                                 |             |                                                  |          |                     |      |          |      |
| 2,4-Dimethylphenol          | ND               | 0.30 |                                 |             |                                                  |          |                     |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| 2,4-Dinitrophenol           | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|                            |           |      |                          |             |                                           |          |              |      |          |      |
|----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                  | mb-15576  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                 | PBS       |      | Batch ID: 15576          |             | RunNo: 21591                              |          |              |      |          |      |
| Prep Date:                 | 9/29/2014 |      | Analysis Date: 10/1/2014 |             | SeqNo: 632834                             |          | Units: mg/Kg |      |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Fluoranthene               | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Fluorene                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Hexachlorobenzene          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Hexachloroethane           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Isophorone                 | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2-Methylphenol             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2-Nitroaniline             | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3-Nitroaniline             | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Nitroaniline             | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Nitrobenzene               | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Nitrophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Nitrophenol              | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Pentachlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Phenanthrene               | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Phenol                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Pyrene                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Pyridine                   | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Surr: 2-Fluorophenol       | 2.3       |      | 3.330                    |             | 68.5                                      | 21       | 111          |      |          |      |
| Surr: Phenol-d5            | 2.3       |      | 3.330                    |             | 69.7                                      | 23.1     | 117          |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.8       |      | 3.330                    |             | 55.4                                      | 22.7     | 88.9         |      |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |      | 1.670                    |             | 75.1                                      | 24.5     | 126          |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.2       |      | 1.670                    |             | 70.9                                      | 21.2     | 129          |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |      | 1.670                    |             | 76.0                                      | 39.4     | 107          |      |          |      |

### Qualifiers:

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

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
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P Sample pH greater than 2.  
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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | lcs-15576 |      | SampType: LCS            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15576          |             |      | RunNo: 21591                              |           |              |          |      |
| Prep Date:                 | 9/29/2014 |      | Analysis Date: 10/1/2014 |             |      | SeqNo: 632836                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Acenaphthene               | 1.3       | 0.20 | 1.670                    | 0           | 76.1 | 50.7                                      | 110       |              |          |      |
| 4-Chloro-3-methylphenol    | 3.0       | 0.50 | 3.330                    | 0           | 91.1 | 47.8                                      | 107       |              |          |      |
| 2-Chlorophenol             | 2.6       | 0.20 | 3.330                    | 0           | 79.2 | 45.7                                      | 108       |              |          |      |
| 1,4-Dichlorobenzene        | 1.1       | 0.20 | 1.670                    | 0           | 65.7 | 46.1                                      | 112       |              |          |      |
| 2,4-Dinitrotoluene         | 1.2       | 0.50 | 1.670                    | 0           | 73.5 | 44.9                                      | 114       |              |          |      |
| N-Nitrosodi-n-propylamine  | 1.0       | 0.20 | 1.670                    | 0           | 61.7 | 38.7                                      | 128       |              |          |      |
| 4-Nitrophenol              | 2.6       | 0.25 | 3.330                    | 0           | 78.3 | 40.2                                      | 103       |              |          |      |
| Pentachlorophenol          | 1.3       | 0.40 | 3.330                    | 0           | 39.8 | 32.9                                      | 94        |              |          |      |
| Phenol                     | 2.7       | 0.20 | 3.330                    | 0           | 81.0 | 44.1                                      | 109       |              |          |      |
| Pyrene                     | 1.3       | 0.20 | 1.670                    | 0           | 80.6 | 51.9                                      | 109       |              |          |      |
| 1,2,4-Trichlorobenzene     | 1.2       | 0.20 | 1.670                    | 0           | 74.2 | 49.5                                      | 115       |              |          |      |
| Surr: 2-Fluorophenol       | 2.3       |      | 3.330                    |             | 68.4 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.5       |      | 3.330                    |             | 74.0 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.4       |      | 3.330                    |             | 72.5 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.4       |      | 1.670                    |             | 82.1 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 78.1 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.5       |      | 1.670                    |             | 87.4 | 39.4                                      | 107       |              |          |      |

|                            |                    |      |                          |             |      |                                           |           |                  |          |      |
|----------------------------|--------------------|------|--------------------------|-------------|------|-------------------------------------------|-----------|------------------|----------|------|
| Sample ID                  | 1409E14-002Bms     |      | SampType: MS             |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |                  |          |      |
| Client ID:                 | SWMU 13-8 (0.5-2') |      | Batch ID: 15576          |             |      | RunNo: 21591                              |           |                  |          |      |
| Prep Date:                 | 9/29/2014          |      | Analysis Date: 10/1/2014 |             |      | SeqNo: 632861                             |           | Units: mg/Kg-dry |          |      |
| Analyte                    | Result             | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD             | RPDLimit | Qual |
| Acenaphthene               | 1.2                | 0.46 | 1.922                    | 0           | 60.4 | 53.8                                      | 92.8      |                  |          |      |
| 4-Chloro-3-methylphenol    | 2.7                | 1.2  | 3.832                    | 0           | 69.8 | 34.9                                      | 104       |                  |          |      |
| 2-Chlorophenol             | 2.3                | 0.46 | 3.832                    | 0           | 59.5 | 18.2                                      | 105       |                  |          |      |
| 1,4-Dichlorobenzene        | 0.97               | 0.46 | 1.922                    | 0           | 50.5 | 18.1                                      | 112       |                  |          |      |
| 2,4-Dinitrotoluene         | ND                 | 1.2  | 1.922                    | 0           | 58.3 | 22                                        | 144       |                  |          |      |
| N-Nitrosodi-n-propylamine  | 1.1                | 0.46 | 1.922                    | 0           | 55.6 | 58.6                                      | 101       |                  |          | S    |
| 4-Nitrophenol              | 2.1                | 0.58 | 3.832                    | 0           | 53.5 | 13.7                                      | 127       |                  |          |      |
| Pentachlorophenol          | 1.3                | 0.92 | 3.832                    | 0           | 33.0 | 16.5                                      | 107       |                  |          |      |
| Phenol                     | 2.2                | 0.46 | 3.832                    | 0           | 58.6 | 12.5                                      | 114       |                  |          |      |
| Pyrene                     | 1.3                | 0.46 | 1.922                    | 0           | 65.4 | 14.2                                      | 116       |                  |          |      |
| 1,2,4-Trichlorobenzene     | 1.1                | 0.46 | 1.922                    | 0           | 56.8 | 16                                        | 125       |                  |          |      |
| Surr: 2-Fluorophenol       | 1.6                |      | 3.832                    |             | 42.6 | 21                                        | 111       |                  |          |      |
| Surr: Phenol-d5            | 1.9                |      | 3.832                    |             | 49.0 | 23.1                                      | 117       |                  |          |      |
| Surr: 2,4,6-Tribromophenol | 2.3                |      | 3.832                    |             | 59.6 | 22.7                                      | 88.9      |                  |          |      |
| Surr: Nitrobenzene-d5      | 1.0                |      | 1.922                    |             | 53.7 | 24.5                                      | 126       |                  |          |      |
| Surr: 2-Fluorobiphenyl     | 1.0                |      | 1.922                    |             | 53.5 | 21.2                                      | 129       |                  |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

**Client:** Western Refining Southwest, Inc.

**Project:** Group 9

|                       |                    |                |           |             |                                 |          |           |      |          |      |
|-----------------------|--------------------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID             | 1409E14-002Bms     | SampType:      | MS        | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:            | SWMU 13-8 (0.5-2') | Batch ID:      | 15576     | RunNo:      | 21591                           |          |           |      |          |      |
| Prep Date:            | 9/29/2014          | Analysis Date: | 10/1/2014 | SeqNo:      | 632861                          | Units:   | mg/Kg-dry |      |          |      |
| Analyte               | Result             | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Terphenyl-d14 | 1.1                |                | 1.922     |             | 58.3                            | 39.4     | 107       |      |          |      |

|                            |                    |                |           |             |                                 |          |           |      |          |      |
|----------------------------|--------------------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | 1409E14-002Bmsd    | SampType:      | MSD       | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | SWMU 13-8 (0.5-2') | Batch ID:      | 15576     | RunNo:      | 21591                           |          |           |      |          |      |
| Prep Date:                 | 9/29/2014          | Analysis Date: | 10/1/2014 | SeqNo:      | 632863                          | Units:   | mg/Kg-dry |      |          |      |
| Analyte                    | Result             | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene               | 1.2                | 0.46           | 1.937     | 0           | 63.6                            | 53.8     | 92.8      | 5.95 | 22       |      |
| 4-Chloro-3-methylphenol    | 2.8                | 1.2            | 3.863     | 0           | 72.7                            | 34.9     | 104       | 4.87 | 27.3     |      |
| 2-Chlorophenol             | 2.5                | 0.46           | 3.863     | 0           | 64.0                            | 18.2     | 105       | 8.12 | 26.3     |      |
| 1,4-Dichlorobenzene        | 1.1                | 0.46           | 1.937     | 0           | 54.5                            | 18.1     | 112       | 8.40 | 27.4     |      |
| 2,4-Dinitrotoluene         | 1.2                | 1.2            | 1.937     | 0           | 62.0                            | 22       | 144       | 7.03 | 27.4     |      |
| N-Nitrosodi-n-propylamine  | 1.2                | 0.46           | 1.937     | 0           | 61.8                            | 58.6     | 101       | 11.4 | 22.6     |      |
| 4-Nitrophenol              | 2.4                | 0.58           | 3.863     | 0           | 63.3                            | 13.7     | 127       | 17.5 | 20       |      |
| Pentachlorophenol          | 1.7                | 0.93           | 3.863     | 0           | 43.8                            | 16.5     | 107       | 28.8 | 27.1     | R    |
| Phenol                     | 2.4                | 0.46           | 3.863     | 0           | 62.6                            | 12.5     | 114       | 7.34 | 32.2     |      |
| Pyrene                     | 1.4                | 0.46           | 1.937     | 0           | 70.1                            | 14.2     | 116       | 7.75 | 29.5     |      |
| 1,2,4-Trichlorobenzene     | 1.1                | 0.46           | 1.937     | 0           | 58.8                            | 16       | 125       | 4.32 | 27.8     |      |
| Surr: 2-Fluorophenol       | 1.7                |                | 3.863     |             | 45.1                            | 21       | 111       | 0    | 0        |      |
| Surr: Phenol-d5            | 2.0                |                | 3.863     |             | 52.7                            | 23.1     | 117       | 0    | 0        |      |
| Surr: 2,4,6-Tribromophenol | 2.4                |                | 3.863     |             | 61.9                            | 22.7     | 88.9      | 0    | 0        |      |
| Surr: Nitrobenzene-d5      | 1.1                |                | 1.937     |             | 58.0                            | 24.5     | 126       | 0    | 0        |      |
| Surr: 2-Fluorobiphenyl     | 1.1                |                | 1.937     |             | 54.9                            | 21.2     | 129       | 0    | 0        |      |
| Surr: 4-Terphenyl-d14      | 1.2                |                | 1.937     |             | 61.0                            | 39.4     | 107       | 0    | 0        |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|            |           |       |                |             |      |           |                          |      |              |      |  |
|------------|-----------|-------|----------------|-------------|------|-----------|--------------------------|------|--------------|------|--|
| Sample ID  | MB-15734  |       | SampType:      | MBLK        |      | TestCode: | EPA Method 7471: Mercury |      |              |      |  |
| Client ID: | PBS       |       | Batch ID:      | 15734       |      | RunNo:    | 21721                    |      |              |      |  |
| Prep Date: | 10/6/2014 |       | Analysis Date: | 10/7/2014   |      | SeqNo:    | 637705                   |      | Units: mg/Kg |      |  |
| Analyte    | Result    | PQL   | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                | %RPD | RPDLimit     | Qual |  |
| Mercury    | ND        | 0.033 |                |             |      |           |                          |      |              |      |  |

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | LCS-15734 |       | SampType: LCS            |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | LCSS      |       | Batch ID: 15734          |             | RunNo: 21721                       |          |              |      |          |      |
| Prep Date: | 10/6/2014 |       | Analysis Date: 10/7/2014 |             | SeqNo: 637706                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercury    | 0.17      | 0.033 | 0.1667                   | 0           | 105                                | 80       | 120          |      |          |      |

### Qualifiers:

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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>MB-15704</b>  |      | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>PBS</b>       |      | Batch ID:      | <b>15704</b>     |      | RunNo:    | <b>21664</b>                         |      |                     |      |
| Prep Date: | <b>10/3/2014</b> |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635633</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Arsenic    | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Barium     | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Beryllium  | ND               | 0.15 |                |                  |      |           |                                      |      |                     |      |
| Cadmium    | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Chromium   | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Cobalt     | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Lead       | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Nickel     | ND               | 0.50 |                |                  |      |           |                                      |      |                     |      |
| Selenium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Silver     | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Vanadium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Zinc       | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>LCS-15704</b> |      | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>LCSS</b>      |      | Batch ID:      | <b>15704</b>     |      | RunNo:    | <b>21664</b>                         |      |                     |      |
| Prep Date: | <b>10/3/2014</b> |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635634</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | 24               | 2.5  | 25.00          | 0                | 97.6 | 80        | 120                                  |      |                     |      |
| Arsenic    | 25               | 2.5  | 25.00          | 0                | 100  | 80        | 120                                  |      |                     |      |
| Barium     | 24               | 0.10 | 25.00          | 0                | 96.7 | 80        | 120                                  |      |                     |      |
| Beryllium  | 26               | 0.15 | 25.00          | 0                | 103  | 80        | 120                                  |      |                     |      |
| Cadmium    | 24               | 0.10 | 25.00          | 0                | 96.8 | 80        | 120                                  |      |                     |      |
| Chromium   | 24               | 0.30 | 25.00          | 0                | 96.5 | 80        | 120                                  |      |                     |      |
| Cobalt     | 23               | 0.30 | 25.00          | 0                | 93.9 | 80        | 120                                  |      |                     |      |
| Lead       | 24               | 0.25 | 25.00          | 0                | 94.3 | 80        | 120                                  |      |                     |      |
| Nickel     | 23               | 0.50 | 25.00          | 0                | 93.6 | 80        | 120                                  |      |                     |      |
| Selenium   | 24               | 2.5  | 25.00          | 0                | 94.1 | 80        | 120                                  |      |                     |      |
| Silver     | 5.0              | 0.25 | 5.000          | 0                | 99.8 | 80        | 120                                  |      |                     |      |
| Vanadium   | 25               | 2.5  | 25.00          | 0                | 102  | 80        | 120                                  |      |                     |      |
| Zinc       | 24               | 2.5  | 25.00          | 0                | 95.7 | 80        | 120                                  |      |                     |      |

|            |                          |      |                |                  |      |           |                                      |      |                         |      |
|------------|--------------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|-------------------------|------|
| Sample ID  | <b>1409E14-001BMS</b>    |      | SampType:      | <b>MS</b>        |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                         |      |
| Client ID: | <b>SWMU 13-8 (0-0.5)</b> |      | Batch ID:      | <b>15704</b>     |      | RunNo:    | <b>21664</b>                         |      |                         |      |
| Prep Date: | <b>10/3/2014</b>         |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635637</b>                        |      | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                   | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit                | Qual |
| Arsenic    | 24                       | 2.6  | 26.41          | 1.583            | 86.1 | 75        | 125                                  |      |                         |      |
| Beryllium  | 23                       | 0.16 | 26.41          | 0.2197           | 86.7 | 75        | 125                                  |      |                         |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

**Client:** Western Refining Southwest, Inc.

**Project:** Group 9

|            |                          |      |                |                  |      |           |                                      |      |                         |      |
|------------|--------------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|-------------------------|------|
| Sample ID  | <b>1409E14-001BMS</b>    |      | SampType:      | <b>MS</b>        |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                         |      |
| Client ID: | <b>SWMU 13-8 (0-0.5)</b> |      | Batch ID:      | <b>15704</b>     |      | RunNo:    | <b>21664</b>                         |      |                         |      |
| Prep Date: | <b>10/3/2014</b>         |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635637</b>                        |      | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                   | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit                | Qual |
| Cadmium    | 22                       | 0.11 | 26.41          | 0.06840          | 82.7 | 75        | 125                                  |      |                         |      |
| Cobalt     | 24                       | 0.32 | 26.41          | 3.505            | 77.9 | 75        | 125                                  |      |                         |      |
| Silver     | 4.5                      | 0.26 | 5.282          | 0                | 84.7 | 75        | 125                                  |      |                         |      |
| Vanadium   | 47                       | 2.6  | 26.41          | 22.14            | 94.6 | 75        | 125                                  |      |                         |      |

|            |                          |      |                |                  |      |           |                                      |      |                         |      |
|------------|--------------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|-------------------------|------|
| Sample ID  | <b>1409E14-001BMSD</b>   |      | SampType:      | <b>MSD</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                         |      |
| Client ID: | <b>SWMU 13-8 (0-0.5)</b> |      | Batch ID:      | <b>15704</b>     |      | RunNo:    | <b>21664</b>                         |      |                         |      |
| Prep Date: | <b>10/3/2014</b>         |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635638</b>                        |      | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                   | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit                | Qual |
| Arsenic    | 23                       | 2.5  | 25.02          | 1.583            | 84.2 | 75        | 125                                  | 7.17 | 20                      |      |
| Beryllium  | 22                       | 0.15 | 25.02          | 0.2197           | 86.4 | 75        | 125                                  | 5.77 | 20                      |      |
| Cadmium    | 21                       | 0.10 | 25.02          | 0.06840          | 82.3 | 75        | 125                                  | 5.88 | 20                      |      |
| Cobalt     | 23                       | 0.30 | 25.02          | 3.505            | 76.4 | 75        | 125                                  | 6.20 | 20                      |      |
| Silver     | 4.2                      | 0.25 | 5.003          | 0                | 84.3 | 75        | 125                                  | 5.94 | 20                      |      |
| Vanadium   | 43                       | 2.5  | 25.02          | 22.14            | 83.1 | 75        | 125                                  | 9.28 | 20                      |      |

|            |                          |      |                |                  |      |           |                                      |      |                         |      |
|------------|--------------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|-------------------------|------|
| Sample ID  | <b>1409E14-001BMS</b>    |      | SampType:      | <b>MS</b>        |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                         |      |
| Client ID: | <b>SWMU 13-8 (0-0.5)</b> |      | Batch ID:      | <b>15704</b>     |      | RunNo:    | <b>21664</b>                         |      |                         |      |
| Prep Date: | <b>10/3/2014</b>         |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635682</b>                        |      | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                   | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit                | Qual |
| Antimony   | 9.5                      | 2.6  | 26.41          | 0                | 35.9 | 75        | 125                                  |      |                         | S    |
| Nickel     | 25                       | 0.53 | 26.41          | 4.918            | 75.3 | 75        | 125                                  |      |                         |      |

|            |                          |      |                |                  |      |           |                                      |      |                         |      |
|------------|--------------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|-------------------------|------|
| Sample ID  | <b>1409E14-001BMSD</b>   |      | SampType:      | <b>MSD</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                         |      |
| Client ID: | <b>SWMU 13-8 (0-0.5)</b> |      | Batch ID:      | <b>15704</b>     |      | RunNo:    | <b>21664</b>                         |      |                         |      |
| Prep Date: | <b>10/3/2014</b>         |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635683</b>                        |      | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                   | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit                | Qual |
| Antimony   | 9.0                      | 2.5  | 25.02          | 0                | 36.0 | 75        | 125                                  | 5.10 | 20                      | S    |
| Nickel     | 24                       | 0.50 | 25.02          | 4.918            | 75.7 | 75        | 125                                  | 3.89 | 20                      |      |

|            |                          |      |                |                  |      |           |                                      |      |                         |      |
|------------|--------------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|-------------------------|------|
| Sample ID  | <b>1409E14-001BMS</b>    |      | SampType:      | <b>MS</b>        |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                         |      |
| Client ID: | <b>SWMU 13-8 (0-0.5)</b> |      | Batch ID:      | <b>15704</b>     |      | RunNo:    | <b>21718</b>                         |      |                         |      |
| Prep Date: | <b>10/3/2014</b>         |      | Analysis Date: | <b>10/7/2014</b> |      | SeqNo:    | <b>637649</b>                        |      | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                   | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit                | Qual |
| Barium     | 260                      | 0.11 | 26.41          | 241.6            | 72.6 | 75        | 125                                  |      |                         | S    |
| Chromium   | 25                       | 0.32 | 26.41          | 7.495            | 67.5 | 75        | 125                                  |      |                         | S    |

### Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E14

06-Jan-15

Client: Western Refining Southwest, Inc.

Project: Group 9

|            |                   |                |           |             |                               |          |           |      |          |      |
|------------|-------------------|----------------|-----------|-------------|-------------------------------|----------|-----------|------|----------|------|
| Sample ID  | 1409E14-001BMS    | SampType:      | MS        | TestCode:   | EPA Method 6010B: Soil Metals |          |           |      |          |      |
| Client ID: | SWMU 13-8 (0-0.5) | Batch ID:      | 15704     | RunNo:      | 21718                         |          |           |      |          |      |
| Prep Date: | 10/3/2014         | Analysis Date: | 10/7/2014 | SeqNo:      | 637649                        | Units:   | mg/Kg-dry |      |          |      |
| Analyte    | Result            | PQL            | SPK value | SPK Ref Val | %REC                          | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Lead       | 24                | 0.26           | 26.41     | 4.298       | 75.3                          | 75       | 125       |      |          |      |
| Selenium   | 20                | 2.6            | 26.41     | 0           | 74.1                          | 75       | 125       |      |          | S    |
| Zinc       | 62                | 2.6            | 26.41     | 41.59       | 78.1                          | 75       | 125       |      |          |      |

|            |                   |                |           |                                         |       |                  |           |      |          |      |
|------------|-------------------|----------------|-----------|-----------------------------------------|-------|------------------|-----------|------|----------|------|
| Sample ID  | 1409E14-001BMSD   | SampType:      | MSD       | TestCode: EPA Method 6010B: Soil Metals |       |                  |           |      |          |      |
| Client ID: | SWMU 13-8 (0-0.5) | Batch ID:      | 15704     | RunNo: 21718                            |       |                  |           |      |          |      |
| Prep Date: | 10/3/2014         | Analysis Date: | 10/7/2014 | SeqNo: 637650                           |       | Units: mg/Kg-dry |           |      |          |      |
| Analyte    | Result            | PQL            | SPK value | SPK Ref Val                             | %REC  | LowLimit         | HighLimit | %RPD | RPDLimit | Qual |
| Barium     | 230               | 0.10           | 25.02     | 241.6                                   | -45.4 | 75               | 125       | 12.4 | 20       | S    |
| Chromium   | 25                | 0.30           | 25.02     | 7.495                                   | 69.9  | 75               | 125       | 1.38 | 20       | S    |
| Lead       | 24                | 0.25           | 25.02     | 4.298                                   | 77.8  | 75               | 125       | 1.82 | 20       |      |
| Selenium   | 19                | 2.5            | 25.02     | 0                                       | 75.9  | 75               | 125       | 3.04 | 20       |      |
| Zinc       | 58                | 2.5            | 25.02     | 41.59                                   | 65.6  | 75               | 125       | 7.01 | 20       | S    |

### Qualifiers:

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J Analyte detected below quantitation limits  
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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

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

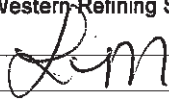
# Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409E14

RcptNo: 1

Received by/date:

 09/27/14

Logged By: Ashley Gallegos

9/27/2014 5:45:00 AM



Completed By: Ashley Gallegos

9/27/2014 6:41:11 AM



Reviewed By:

CS

09/29/14

## Chain of Custody

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

## Log In

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

 # of preserved  
bottles checked  
for pH:

(&lt;2 or &gt;12 unless noted)

Adjusted?

Checked by:

## Special Handling (if applicable)

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

Person Notified:

Date

By Whom:

Via:

☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

## 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.1     | Good      | Yes         |         |           |           |



# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                    | Analytical Method                  |
|----------------------------|------------------------------------|
| Antimony                   | SW-846 method 6010/6020            |
| Arsenic                    | SW-846 method 6010/6020            |
| Barium                     | SW-846 method 6010/6020            |
| Beryllium                  | SW-846 method 6010/6020            |
| Cadmium                    | SW-846 method 6010/6020            |
| Chromium                   | SW-846 method 6010/6020            |
| <del>Chromium VI</del>     | <del>SW-846 method 6010/6020</del> |
| Cobalt                     | SW-846 method 6010/6020            |
| Cyanide                    | SW-846 method 335.4/335.2 mod      |
| Lead                       | SW-846 method 6010/6020            |
| <del>Tetraethyl lead</del> | <del>SW-846 method 6010/6020</del> |
| Mercury                    | SW-846 method 7470/7471            |
| Nickel                     | SW-846 method 6010/6020            |
| Selenium                   | SW-846 method 6010/6020            |
| Silver                     | SW-846 method 6010/6020            |
| Vanadium                   | SW-846 method 6010/6020            |
| Zinc                       | SW-846 method 6010/6020            |



Hall Environmental Analysis Laboratory  
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Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 27, 2014

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: Group 9

OrderNo.: 1409E15

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/27/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-001A

**Client Sample ID:** SWMU 13 EB01  
**Collection Date:** 9/25/2014 1:50:00 PM  
**Matrix:** Aqueous

| Analyses                           | Result | RL  | Qual | Units | DF | Date Analyzed         | Batch ID     |
|------------------------------------|--------|-----|------|-------|----|-----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |       |    |                       | Analyst: RAA |
| Benzene                            | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Toluene                            | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Ethylbenzene                       | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Methyl tert-butyl ether (MTBE)     | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,2,4-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,3,5-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,2-Dichloroethane (EDC)           | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,2-Dibromoethane (EDB)            | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Naphthalene                        | ND     | 2.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 2-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Acetone                            | ND     | 10  |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Bromobenzene                       | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Bromodichloromethane               | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Bromoform                          | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Bromomethane                       | ND     | 3.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 2-Butanone                         | ND     | 10  |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Carbon disulfide                   | ND     | 10  |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Carbon Tetrachloride               | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Chlorobenzene                      | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Chloroethane                       | ND     | 2.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Chloroform                         | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Chloromethane                      | ND     | 3.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 2-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 4-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| cis-1,2-DCE                        | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| cis-1,3-Dichloropropene            | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,2-Dibromo-3-chloropropane        | ND     | 2.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Dibromochloromethane               | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Dibromomethane                     | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,2-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,3-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,4-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Dichlorodifluoromethane            | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,1-Dichloroethane                 | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,1-Dichloroethene                 | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,2-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,3-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 2,2-Dichloropropane                | ND     | 2.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| 1,1-Dichloropropene                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |
| Hexachlorobutadiene                | ND     | 1.0 |      | µg/L  | 1  | 10/1/2014 11:57:04 PM | R21596       |

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

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

**Analytical Report**Lab Order: **1409E15**Date Reported: **10/27/2014****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** SWMU 13 EB01**Project:** Group 9**Collection Date:** 9/25/2014 1:50:00 PM**Lab ID:** 1409E15-001A**Matrix:** Aqueous

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed         | Batch ID |
|------------------------------------|--------|--------|------|---------------------|----|-----------------------|----------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                       |          |
| 2-Hexanone                         | ND     | 10     |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Isopropylbenzene                   | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| 4-Isopropyltoluene                 | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| 4-Methyl-2-pentanone               | ND     | 10     |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Methylene Chloride                 | ND     | 3.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| n-Butylbenzene                     | ND     | 3.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| n-Propylbenzene                    | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| sec-Butylbenzene                   | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Styrene                            | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| tert-Butylbenzene                  | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| 1,1,1,2-Tetrachloroethane          | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| 1,1,2,2-Tetrachloroethane          | ND     | 2.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Tetrachloroethene (PCE)            | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| trans-1,2-DCE                      | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| trans-1,3-Dichloropropene          | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| 1,2,3-Trichlorobenzene             | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| 1,2,4-Trichlorobenzene             | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| 1,1,1-Trichloroethane              | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| 1,1,2-Trichloroethane              | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Trichloroethene (TCE)              | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Trichlorofluoromethane             | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| 1,2,3-Trichloropropane             | ND     | 2.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Vinyl chloride                     | ND     | 1.0    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Xylenes, Total                     | ND     | 1.5    |      | µg/L                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Surr: 1,2-Dichloroethane-d4        | 84.6   | 70-130 |      | %REC                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Surr: 4-Bromofluorobenzene         | 87.3   | 70-130 |      | %REC                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Surr: Dibromofluoromethane         | 89.3   | 70-130 |      | %REC                | 1  | 10/1/2014 11:57:04 PM | R21596   |
| Surr: Toluene-d8                   | 90.9   | 70-130 |      | %REC                | 1  | 10/1/2014 11:57:04 PM | R21596   |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-001B

**Client Sample ID:** SWMU 13 EB01  
**Collection Date:** 9/25/2014 1:50:00 PM  
**Matrix:** Aqueous

| Analyses                                | Result | RL       | Qual | Units | DF | Date Analyzed        | Batch ID     |
|-----------------------------------------|--------|----------|------|-------|----|----------------------|--------------|
| <b>EPA METHOD 8015D: GASOLINE RANGE</b> |        |          |      |       |    |                      | Analyst: NSB |
| Gasoline Range Organics (GRO)           | ND     | 0.050    |      | mg/L  | 1  | 9/29/2014 4:38:40 PM | R21528       |
| Surr: BFB                               | 91.4   | 70.9-130 |      | %REC  | 1  | 9/29/2014 4:38:40 PM | R21528       |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: **1409E15**

Date Reported: **10/27/2014**

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-001C

**Client Sample ID:** SWMU 13 EB01  
**Collection Date:** 9/25/2014 1:50:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL     | Qual | Units | DF | Date Analyzed        | Batch ID            |
|---------------------------------------|--------|--------|------|-------|----|----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE</b> |        |        |      |       |    |                      | Analyst: <b>BCN</b> |
| Diesel Range Organics (DRO)           | ND     | 1.0    |      | mg/L  | 1  | 10/1/2014 5:21:14 PM | 15594               |
| Motor Oil Range Organics (MRO)        | ND     | 5.0    |      | mg/L  | 1  | 10/1/2014 5:21:14 PM | 15594               |
| Surr: DNOP                            | 75.8   | 59-141 |      | %REC  | 1  | 10/1/2014 5:21:14 PM | 15594               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-001D

**Client Sample ID:** SWMU 13 EB01  
**Collection Date:** 9/25/2014 1:50:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL | Qual | Units | DF           | Date Analyzed        | Batch ID |
|----------------------------------------|--------|----|------|-------|--------------|----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |    |      |       | Analyst: JDC |                      |          |
| Acenaphthene                           | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Acenaphthylene                         | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Aniline                                | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Anthracene                             | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Azobenzene                             | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Benz(a)anthracene                      | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Benzo(a)pyrene                         | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Benzo(b)fluoranthene                   | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Benzo(g,h,i)perylene                   | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Benzo(k)fluoranthene                   | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Benzoic acid                           | ND     | 20 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Benzyl alcohol                         | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Bis(2-chloroethoxy)methane             | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Bis(2-chloroethyl)ether                | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Bis(2-chloroisopropyl)ether            | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Bis(2-ethylhexyl)phthalate             | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 4-Bromophenyl phenyl ether             | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Butyl benzyl phthalate                 | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Carbazole                              | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 4-Chloro-3-methylphenol                | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 4-Chloroaniline                        | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 2-Chloronaphthalene                    | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 2-Chlorophenol                         | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 4-Chlorophenyl phenyl ether            | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Chrysene                               | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Di-n-butyl phthalate                   | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Di-n-octyl phthalate                   | ND     | 20 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Dibenz(a,h)anthracene                  | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Dibenzofuran                           | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 1,2-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 1,3-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 1,4-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 3,3'-Dichlorobenzidine                 | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Diethyl phthalate                      | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| Dimethyl phthalate                     | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 2,4-Dichlorophenol                     | ND     | 20 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 2,4-Dimethylphenol                     | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 4,6-Dinitro-2-methylphenol             | ND     | 20 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 2,4-Dinitrophenol                      | ND     | 20 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 2,4-Dinitrotoluene                     | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |
| 2,6-Dinitrotoluene                     | ND     | 10 |      | µg/L  | 1            | 9/30/2014 2:37:02 PM | 15605    |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-001D

**Client Sample ID:** SWMU 13 EB01  
**Collection Date:** 9/25/2014 1:50:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL        | Qual | Units        | DF | Date Analyzed        | Batch ID |
|----------------------------------------|--------|-----------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC |    |                      |          |
| Fluoranthene                           | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Fluorene                               | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Hexachlorobenzene                      | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Hexachlorobutadiene                    | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Hexachlorocyclopentadiene              | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Hexachloroethane                       | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Isophorone                             | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 1-Methylnaphthalene                    | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 2-Methylnaphthalene                    | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 2-Methylphenol                         | ND     | 20        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 3+4-Methylphenol                       | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| N-Nitrosodi-n-propylamine              | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| N-Nitrosodimethylamine                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| N-Nitrosodiphenylamine                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Naphthalene                            | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 2-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 3-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 4-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Nitrobenzene                           | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 2-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 4-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Pentachlorophenol                      | ND     | 20        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Phenanthrene                           | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Phenol                                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Pyrene                                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Pyridine                               | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| 2,4,6-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Surr: 2-Fluorophenol                   | 64.1   | 12.1-85.8 |      | %REC         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Surr: Phenol-d5                        | 56.8   | 17.7-65.8 |      | %REC         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Surr: 2,4,6-Tribromophenol             | 52.3   | 26-138    |      | %REC         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Surr: Nitrobenzene-d5                  | 80.7   | 47.5-119  |      | %REC         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Surr: 2-Fluorobiphenyl                 | 73.5   | 48.1-106  |      | %REC         | 1  | 9/30/2014 2:37:02 PM | 15605    |
| Surr: 4-Terphenyl-d14                  | 82.0   | 44-113    |      | %REC         | 1  | 9/30/2014 2:37:02 PM | 15605    |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-001E

**Client Sample ID:** SWMU 13 EB01  
**Collection Date:** 9/25/2014 1:50:00 PM  
**Matrix:** Aqueous

| Analyses                                   | Result | RL   | Qual | Units      | DF | Date Analyzed        | Batch ID            |
|--------------------------------------------|--------|------|------|------------|----|----------------------|---------------------|
| <b>EPA METHOD 300.0: ANIONS</b>            |        |      |      |            |    |                      | Analyst: <b>LGP</b> |
| Chloride                                   | ND     | 0.50 |      | mg/L       | 1  | 9/29/2014 6:02:55 PM | R21543              |
| Sulfate                                    | ND     | 0.50 |      | mg/L       | 1  | 9/29/2014 6:02:55 PM | R21543              |
| Nitrate+Nitrite as N                       | ND     | 1.0  |      | mg/L       | 5  | 9/30/2014 2:46:25 PM | R21564              |
| <b>SM2320B: ALKALINITY</b>                 |        |      |      |            |    |                      | Analyst: <b>JRR</b> |
| Bicarbonate (As CaCO3)                     | ND     | 20   |      | mg/L CaCO3 | 1  | 9/29/2014 5:57:54 PM | R21535              |
| Carbonate (As CaCO3)                       | ND     | 2.0  |      | mg/L CaCO3 | 1  | 9/29/2014 5:57:54 PM | R21535              |
| Total Alkalinity (as CaCO3)                | ND     | 20   |      | mg/L CaCO3 | 1  | 9/29/2014 5:57:54 PM | R21535              |
| <b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b> |        |      |      |            |    |                      | Analyst: <b>KS</b>  |
| Total Dissolved Solids                     | ND     | 20.0 |      | mg/L       | 1  | 10/3/2014 4:07:00 PM | 15675               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-001F

**Client Sample ID:** SWMU 13 EB01  
**Collection Date:** 9/25/2014 1:50:00 PM  
**Matrix:** Aqueous

| Analyses                                  | Result | RL      | Qual | Units        | DF | Date Analyzed        | Batch ID |
|-------------------------------------------|--------|---------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 200.7: DISSOLVED METALS</b> |        |         |      | Analyst: JLF |    |                      |          |
| Barium                                    | ND     | 0.0020  |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Beryllium                                 | ND     | 0.0020  |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Cadmium                                   | ND     | 0.0020  |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Calcium                                   | ND     | 1.0     |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Chromium                                  | ND     | 0.0060  |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Cobalt                                    | ND     | 0.0060  |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Iron                                      | ND     | 0.020   |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Lead                                      | ND     | 0.0050  |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Magnesium                                 | ND     | 1.0     |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Manganese                                 | ND     | 0.0020  |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Nickel                                    | ND     | 0.010   |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Potassium                                 | ND     | 1.0     |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Silver                                    | ND     | 0.0050  |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Sodium                                    | ND     | 1.0     |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Vanadium                                  | ND     | 0.050   |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| Zinc                                      | 0.026  | 0.010   |      | mg/L         | 1  | 10/7/2014 5:26:55 PM | R21759   |
| <b>EPA 200.8: DISSOLVED METALS</b>        |        |         |      | Analyst: DBD |    |                      |          |
| Antimony                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 2:06:23 PM | R21702   |
| Arsenic                                   | ND     | 0.0010  |      | mg/L         | 1  | 9/30/2014 2:48:12 PM | R21559   |
| Selenium                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 2:06:23 PM | R21702   |
| <b>EPA METHOD 245.1: MERCURY</b>          |        |         |      | Analyst: MMD |    |                      |          |
| Mercury                                   | ND     | 0.00020 |      | mg/L         | 1  | 10/8/2014 3:37:32 PM | 15783    |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-001G

**Client Sample ID:** SWMU 13 EB01  
**Collection Date:** 9/25/2014 1:50:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL      | Qual | Units        | DF | Date Analyzed         | Batch ID |
|---------------------------------------|--------|---------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: TOTAL METALS</b> |        |         |      | Analyst: JLF |    |                       |          |
| Barium                                | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Beryllium                             | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Cadmium                               | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Calcium                               | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Chromium                              | ND     | 0.0060  |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Cobalt                                | ND     | 0.0060  |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Iron                                  | ND     | 0.020   |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Lead                                  | ND     | 0.0050  |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Magnesium                             | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Manganese                             | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Nickel                                | ND     | 0.010   |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Potassium                             | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Silver                                | ND     | 0.0050  |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Sodium                                | ND     | 1.0     |      | mg/L         | 1  | 10/1/2014 7:03:23 PM  | 15608    |
| Vanadium                              | ND     | 0.050   |      | mg/L         | 1  | 9/30/2014 6:27:54 PM  | 15608    |
| Zinc                                  | ND     | 0.010   |      | mg/L         | 1  | 10/1/2014 7:03:23 PM  | 15608    |
| <b>200.8 ICPMS METALS:TOTAL</b>       |        |         |      | Analyst: DBD |    |                       |          |
| Antimony                              | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 11:55:13 AM | 15608    |
| Arsenic                               | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 11:55:13 AM | 15608    |
| Selenium                              | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 11:55:13 AM | 15608    |
| <b>EPA METHOD 245.1: MERCURY</b>      |        |         |      | Analyst: MMD |    |                       |          |
| Mercury                               | ND     | 0.00020 |      | mg/L         | 1  | 10/8/2014 3:40:31 PM  | 15783    |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-002A

**Client Sample ID:** SWMU 13 FB01  
**Collection Date:** 9/25/2014 2:10:00 PM  
**Matrix:** Aqueous

| Analyses                           | Result | RL  | Qual | Units | DF | Date Analyzed         | Batch ID     |
|------------------------------------|--------|-----|------|-------|----|-----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |       |    |                       | Analyst: RAA |
| Benzene                            | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Toluene                            | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Ethylbenzene                       | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Methyl tert-butyl ether (MTBE)     | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,2,4-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,3,5-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,2-Dichloroethane (EDC)           | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,2-Dibromoethane (EDB)            | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Naphthalene                        | ND     | 2.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 2-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Acetone                            | ND     | 10  |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Bromobenzene                       | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Bromodichloromethane               | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Bromoform                          | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Bromomethane                       | ND     | 3.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 2-Butanone                         | ND     | 10  |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Carbon disulfide                   | ND     | 10  |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Carbon Tetrachloride               | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Chlorobenzene                      | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Chloroethane                       | ND     | 2.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Chloroform                         | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Chloromethane                      | ND     | 3.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 2-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 4-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| cis-1,2-DCE                        | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| cis-1,3-Dichloropropene            | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,2-Dibromo-3-chloropropane        | ND     | 2.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Dibromochloromethane               | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Dibromomethane                     | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,2-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,3-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,4-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Dichlorodifluoromethane            | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,1-Dichloroethane                 | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,1-Dichloroethene                 | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,2-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,3-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 2,2-Dichloropropane                | ND     | 2.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| 1,1-Dichloropropene                | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |
| Hexachlorobutadiene                | ND     | 1.0 |      | µg/L  | 1  | 10/2/2014 12:24:48 AM | R21596       |

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

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

**Analytical Report**Lab Order: **1409E15**Date Reported: **10/27/2014****Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-002A

**Client Sample ID:** SWMU 13 FB01  
**Collection Date:** 9/25/2014 2:10:00 PM  
**Matrix:** Aqueous

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed         | Batch ID |
|------------------------------------|--------|--------|------|---------------------|----|-----------------------|----------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                       |          |
| 2-Hexanone                         | ND     | 10     |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Isopropylbenzene                   | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| 4-Isopropyltoluene                 | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| 4-Methyl-2-pentanone               | ND     | 10     |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Methylene Chloride                 | ND     | 3.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| n-Butylbenzene                     | ND     | 3.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| n-Propylbenzene                    | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| sec-Butylbenzene                   | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Styrene                            | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| tert-Butylbenzene                  | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| 1,1,1,2-Tetrachloroethane          | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| 1,1,2,2-Tetrachloroethane          | ND     | 2.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Tetrachloroethene (PCE)            | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| trans-1,2-DCE                      | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| trans-1,3-Dichloropropene          | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| 1,2,3-Trichlorobenzene             | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| 1,2,4-Trichlorobenzene             | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| 1,1,1-Trichloroethane              | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| 1,1,2-Trichloroethane              | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Trichloroethene (TCE)              | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Trichlorofluoromethane             | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| 1,2,3-Trichloropropane             | ND     | 2.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Vinyl chloride                     | ND     | 1.0    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Xylenes, Total                     | ND     | 1.5    |      | µg/L                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Surr: 1,2-Dichloroethane-d4        | 82.8   | 70-130 |      | %REC                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Surr: 4-Bromofluorobenzene         | 91.9   | 70-130 |      | %REC                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Surr: Dibromofluoromethane         | 88.8   | 70-130 |      | %REC                | 1  | 10/2/2014 12:24:48 AM | R21596   |
| Surr: Toluene-d8                   | 87.0   | 70-130 |      | %REC                | 1  | 10/2/2014 12:24:48 AM | R21596   |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-002B

**Client Sample ID:** SWMU 13 FB01  
**Collection Date:** 9/25/2014 2:10:00 PM  
**Matrix:** Aqueous

| Analyses                                | Result | RL       | Qual | Units | DF | Date Analyzed        | Batch ID     |
|-----------------------------------------|--------|----------|------|-------|----|----------------------|--------------|
| <b>EPA METHOD 8015D: GASOLINE RANGE</b> |        |          |      |       |    |                      | Analyst: NSB |
| Gasoline Range Organics (GRO)           | ND     | 0.050    |      | mg/L  | 1  | 9/29/2014 5:08:36 PM | R21528       |
| Surr: BFB                               | 90.1   | 70.9-130 |      | %REC  | 1  | 9/29/2014 5:08:36 PM | R21528       |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-002C

**Client Sample ID:** SWMU 13 FB01  
**Collection Date:** 9/25/2014 2:10:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL     | Qual | Units | DF | Date Analyzed        | Batch ID            |
|---------------------------------------|--------|--------|------|-------|----|----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE</b> |        |        |      |       |    |                      | Analyst: <b>BCN</b> |
| Diesel Range Organics (DRO)           | ND     | 1.0    |      | mg/L  | 1  | 10/1/2014 6:52:54 PM | 15594               |
| Motor Oil Range Organics (MRO)        | ND     | 5.0    |      | mg/L  | 1  | 10/1/2014 6:52:54 PM | 15594               |
| Surr: DNOP                            | 80.1   | 59-141 |      | %REC  | 1  | 10/1/2014 6:52:54 PM | 15594               |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-002D

**Client Sample ID:** SWMU 13 FB01  
**Collection Date:** 9/25/2014 2:10:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL | Qual | Units        | DF | Date Analyzed        | Batch ID |
|----------------------------------------|--------|----|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |    |      | Analyst: JDC |    |                      |          |
| Acenaphthene                           | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Acenaphthylene                         | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Aniline                                | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Anthracene                             | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Azobenzene                             | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Benz(a)anthracene                      | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Benzo(a)pyrene                         | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Benzo(b)fluoranthene                   | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Benzo(g,h,i)perylene                   | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Benzo(k)fluoranthene                   | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Benzoic acid                           | ND     | 20 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Benzyl alcohol                         | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Bis(2-chloroethoxy)methane             | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Bis(2-chloroethyl)ether                | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Bis(2-chloroisopropyl)ether            | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Bis(2-ethylhexyl)phthalate             | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 4-Bromophenyl phenyl ether             | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Butyl benzyl phthalate                 | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Carbazole                              | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 4-Chloro-3-methylphenol                | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 4-Chloroaniline                        | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2-Chloronaphthalene                    | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2-Chlorophenol                         | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 4-Chlorophenyl phenyl ether            | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Chrysene                               | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Di-n-butyl phthalate                   | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Di-n-octyl phthalate                   | ND     | 20 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Dibenz(a,h)anthracene                  | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Dibenzofuran                           | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 1,2-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 1,3-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 1,4-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 3,3'-Dichlorobenzidine                 | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Diethyl phthalate                      | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Dimethyl phthalate                     | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2,4-Dichlorophenol                     | ND     | 20 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2,4-Dimethylphenol                     | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 4,6-Dinitro-2-methylphenol             | ND     | 20 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2,4-Dinitrophenol                      | ND     | 20 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2,4-Dinitrotoluene                     | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2,6-Dinitrotoluene                     | ND     | 10 |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-002D

**Client Sample ID:** SWMU 13 FB01  
**Collection Date:** 9/25/2014 2:10:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL        | Qual | Units        | DF | Date Analyzed        | Batch ID |
|----------------------------------------|--------|-----------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC |    |                      |          |
| Fluoranthene                           | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Fluorene                               | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Hexachlorobenzene                      | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Hexachlorobutadiene                    | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Hexachlorocyclopentadiene              | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Hexachloroethane                       | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Isophorone                             | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 1-Methylnaphthalene                    | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2-Methylnaphthalene                    | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2-Methylphenol                         | ND     | 20        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 3+4-Methylphenol                       | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| N-Nitrosodi-n-propylamine              | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| N-Nitrosodimethylamine                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| N-Nitrosodiphenylamine                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Naphthalene                            | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 3-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 4-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Nitrobenzene                           | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 4-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Pentachlorophenol                      | ND     | 20        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Phenanthrene                           | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Phenol                                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Pyrene                                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Pyridine                               | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| 2,4,6-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Surr: 2-Fluorophenol                   | 70.8   | 12.1-85.8 |      | %REC         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Surr: Phenol-d5                        | 63.3   | 17.7-65.8 |      | %REC         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Surr: 2,4,6-Tribromophenol             | 60.6   | 26-138    |      | %REC         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Surr: Nitrobenzene-d5                  | 85.8   | 47.5-119  |      | %REC         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Surr: 2-Fluorobiphenyl                 | 74.0   | 48.1-106  |      | %REC         | 1  | 9/30/2014 5:00:58 PM | 15605    |
| Surr: 4-Terphenyl-d14                  | 88.7   | 44-113    |      | %REC         | 1  | 9/30/2014 5:00:58 PM | 15605    |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-002E

**Client Sample ID:** SWMU 13 FB01  
**Collection Date:** 9/25/2014 2:10:00 PM  
**Matrix:** Aqueous

| Analyses                                   | Result | RL   | Qual | Units      | DF | Date Analyzed        | Batch ID            |
|--------------------------------------------|--------|------|------|------------|----|----------------------|---------------------|
| <b>EPA METHOD 300.0: ANIONS</b>            |        |      |      |            |    |                      | Analyst: <b>LGP</b> |
| Chloride                                   | ND     | 0.50 |      | mg/L       | 1  | 9/29/2014 6:27:45 PM | R21543              |
| Sulfate                                    | ND     | 0.50 |      | mg/L       | 1  | 9/29/2014 6:27:45 PM | R21543              |
| Nitrate+Nitrite as N                       | ND     | 1.0  |      | mg/L       | 5  | 9/30/2014 2:58:49 PM | R21564              |
| <b>SM2320B: ALKALINITY</b>                 |        |      |      |            |    |                      | Analyst: <b>JRR</b> |
| Bicarbonate (As CaCO3)                     | ND     | 20   |      | mg/L CaCO3 | 1  | 9/29/2014 6:03:40 PM | R21535              |
| Carbonate (As CaCO3)                       | ND     | 2.0  |      | mg/L CaCO3 | 1  | 9/29/2014 6:03:40 PM | R21535              |
| Total Alkalinity (as CaCO3)                | ND     | 20   |      | mg/L CaCO3 | 1  | 9/29/2014 6:03:40 PM | R21535              |
| <b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b> |        |      |      |            |    |                      | Analyst: <b>KS</b>  |
| Total Dissolved Solids                     | ND     | 20.0 |      | mg/L       | 1  | 10/3/2014 4:07:00 PM | 15675               |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-002F

**Client Sample ID:** SWMU 13 FB01  
**Collection Date:** 9/25/2014 2:10:00 PM  
**Matrix:** Aqueous

| Analyses                                  | Result | RL      | Qual | Units        | DF | Date Analyzed        | Batch ID |
|-------------------------------------------|--------|---------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 200.7: DISSOLVED METALS</b> |        |         |      | Analyst: JLF |    |                      |          |
| Barium                                    | ND     | 0.0020  |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Beryllium                                 | ND     | 0.0020  |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Cadmium                                   | ND     | 0.0020  |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Calcium                                   | ND     | 1.0     |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Chromium                                  | ND     | 0.0060  |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Cobalt                                    | ND     | 0.0060  |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Iron                                      | ND     | 0.020   |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Lead                                      | ND     | 0.0050  |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Magnesium                                 | ND     | 1.0     |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Manganese                                 | ND     | 0.0020  |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Nickel                                    | ND     | 0.010   |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Potassium                                 | ND     | 1.0     |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Silver                                    | ND     | 0.0050  |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Sodium                                    | ND     | 1.0     |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Vanadium                                  | ND     | 0.050   |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| Zinc                                      | 0.089  | 0.010   |      | mg/L         | 1  | 10/7/2014 5:34:25 PM | R21759   |
| <b>EPA 200.8: DISSOLVED METALS</b>        |        |         |      | Analyst: DBD |    |                      |          |
| Antimony                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 2:11:45 PM | R21702   |
| Arsenic                                   | ND     | 0.0010  |      | mg/L         | 1  | 9/30/2014 2:54:24 PM | R21559   |
| Selenium                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 2:11:45 PM | R21702   |
| <b>EPA METHOD 245.1: MERCURY</b>          |        |         |      | Analyst: MMD |    |                      |          |
| Mercury                                   | ND     | 0.00020 |      | mg/L         | 1  | 10/8/2014 3:42:16 PM | 15783    |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409E15

Date Reported: 10/27/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** Group 9  
**Lab ID:** 1409E15-002G

**Client Sample ID:** SWMU 13 FB01  
**Collection Date:** 9/25/2014 2:10:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL      | Qual | Units        | DF | Date Analyzed         | Batch ID |
|---------------------------------------|--------|---------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: TOTAL METALS</b> |        |         |      | Analyst: JLF |    |                       |          |
| Barium                                | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Beryllium                             | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Cadmium                               | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Calcium                               | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Chromium                              | ND     | 0.0060  |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Cobalt                                | ND     | 0.0060  |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Iron                                  | ND     | 0.020   |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Lead                                  | ND     | 0.0050  |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Magnesium                             | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Manganese                             | ND     | 0.0020  |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Nickel                                | ND     | 0.010   |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Potassium                             | ND     | 1.0     |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Silver                                | ND     | 0.0050  |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Sodium                                | ND     | 1.0     |      | mg/L         | 1  | 10/1/2014 7:09:03 PM  | 15608    |
| Vanadium                              | ND     | 0.050   |      | mg/L         | 1  | 9/30/2014 6:33:26 PM  | 15608    |
| Zinc                                  | ND     | 0.010   |      | mg/L         | 1  | 10/1/2014 7:09:03 PM  | 15608    |
| <b>200.8 ICPMS METALS:TOTAL</b>       |        |         |      | Analyst: DBD |    |                       |          |
| Antimony                              | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 12:00:34 PM | 15608    |
| Arsenic                               | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 12:00:34 PM | 15608    |
| Selenium                              | ND     | 0.0010  |      | mg/L         | 1  | 10/8/2014 12:00:34 PM | 15608    |
| <b>EPA METHOD 245.1: MERCURY</b>      |        |         |      | Analyst: MMD |    |                       |          |
| Mercury                               | ND     | 0.00020 |      | mg/L         | 1  | 10/8/2014 3:44:02 PM  | 15783    |

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

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

# Anatek Labs, Inc.

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

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

**Batch #:** 140930018  
**Project Name:** 1409E15

## Analytical Results Report

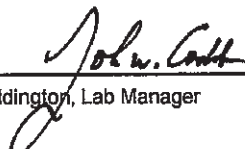
|                         |                             |                        |           |                           |                    |
|-------------------------|-----------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930018-001               | <b>Sampling Date</b>   | 9/25/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E15-001H / SWMU 13 EB01 |                        |           | <b>Sampling Time</b>      | 1:50 PM            |
| <b>Matrix</b>           | Water                       | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                             |                        |           |                           |                    |

| Parameter | Result | Units | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|-------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/L  | 0.01 | 10/7/2014     | CRW     | EPA 335.4 |           |

|                         |                             |                        |           |                           |                    |
|-------------------------|-----------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930018-002               | <b>Sampling Date</b>   | 9/25/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E15-002H / SWMU 13 FB01 |                        |           | <b>Sampling Time</b>      | 2:10 PM            |
| <b>Matrix</b>           | Water                       | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                             |                        |           |                           |                    |

| Parameter | Result | Units | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|-------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/L  | 0.01 | 10/7/2014     | CRW     | EPA 335.4 |           |

Authorized Signature

  
John Coddington, Lab Manager

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

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

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

Wednesday, October 15, 2014

Page 1 of 1

# Anatek Labs, Inc.

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

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

**Batch #:** 140930018  
**Project Name:** 1409E15

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|-----------|---------------|
| Cyanide   | 0.529      | mg/L  | 0.5       | 105.8 | 90-110  | 10/7/2014 | 10/7/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|-------|---------|-----------|---------------|
| 140925049-001 | Cyanide   | ND            | 0.529     | mg/L  | 0.5      | 105.8 | 90-110  | 10/7/2014 | 10/7/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec  | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|------|---------|-----------|---------------|
| Cyanide   | 0.526      | mg/L  | 0.5       | 105.2 | 0.6  | 0-20    | 10/7/2014 | 10/7/2014     |

### Method Blank

| Parameter | Result | Units | PQL  | Prep Date | Analysis Date |
|-----------|--------|-------|------|-----------|---------------|
| Cyanide   | ND     | mg/L  | 0.01 | 10/7/2014 | 10/7/2014     |

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

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C586; MT:Cert0096; FL(NELAP): E871099

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|            |        |                          |           |             |                                              |          |             |      |          |      |
|------------|--------|--------------------------|-----------|-------------|----------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB     | SampType: MBLK           |           |             | TestCode: EPA Method 200.7: Dissolved Metals |          |             |      |          |      |
| Client ID: | PBW    | Batch ID: R21759         |           |             | RunNo: 21759                                 |          |             |      |          |      |
| Prep Date: |        | Analysis Date: 10/7/2014 |           |             | SeqNo: 639199                                |          | Units: mg/L |      |          |      |
| Analyte    | Result | PQL                      | SPK value | SPK Ref Val | %REC                                         | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | ND     | 0.0020                   |           |             |                                              |          |             |      |          |      |
| Beryllium  | ND     | 0.0020                   |           |             |                                              |          |             |      |          |      |
| Cadmium    | ND     | 0.0020                   |           |             |                                              |          |             |      |          |      |
| Calcium    | ND     | 1.0                      |           |             |                                              |          |             |      |          |      |
| Chromium   | ND     | 0.0060                   |           |             |                                              |          |             |      |          |      |
| Cobalt     | ND     | 0.0060                   |           |             |                                              |          |             |      |          |      |
| Iron       | ND     | 0.020                    |           |             |                                              |          |             |      |          |      |
| Lead       | ND     | 0.0050                   |           |             |                                              |          |             |      |          |      |
| Magnesium  | ND     | 1.0                      |           |             |                                              |          |             |      |          |      |
| Manganese  | ND     | 0.0020                   |           |             |                                              |          |             |      |          |      |
| Nickel     | ND     | 0.010                    |           |             |                                              |          |             |      |          |      |
| Potassium  | ND     | 1.0                      |           |             |                                              |          |             |      |          |      |
| Silver     | ND     | 0.0050                   |           |             |                                              |          |             |      |          |      |
| Sodium     | ND     | 1.0                      |           |             |                                              |          |             |      |          |      |
| Vanadium   | ND     | 0.050                    |           |             |                                              |          |             |      |          |      |
| Zinc       | ND     | 0.010                    |           |             |                                              |          |             |      |          |      |

|            |        |        |                          |             |                                              |          |             |      |          |      |
|------------|--------|--------|--------------------------|-------------|----------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS    |        | SampType: LCS            |             | TestCode: EPA Method 200.7: Dissolved Metals |          |             |      |          |      |
| Client ID: | LCSW   |        | Batch ID: R21759         |             | RunNo: 21759                                 |          |             |      |          |      |
| Prep Date: |        |        | Analysis Date: 10/7/2014 |             | SeqNo: 639200                                |          | Units: mg/L |      |          |      |
| Analyte    | Result | PQL    | SPK value                | SPK Ref Val | %REC                                         | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | 0.48   | 0.0020 | 0.5000                   | 0           | 95.7                                         | 85       | 115         |      |          |      |
| Beryllium  | 0.50   | 0.0020 | 0.5000                   | 0           | 99.3                                         | 85       | 115         |      |          |      |
| Cadmium    | 0.48   | 0.0020 | 0.5000                   | 0           | 96.0                                         | 85       | 115         |      |          |      |
| Calcium    | 50     | 1.0    | 50.00                    | 0           | 100                                          | 85       | 115         |      |          |      |
| Chromium   | 0.47   | 0.0060 | 0.5000                   | 0           | 94.5                                         | 85       | 115         |      |          |      |
| Cobalt     | 0.46   | 0.0060 | 0.5000                   | 0           | 92.0                                         | 85       | 115         |      |          |      |
| Iron       | 0.47   | 0.020  | 0.5000                   | 0           | 93.9                                         | 85       | 115         |      |          |      |
| Lead       | 0.47   | 0.0050 | 0.5000                   | 0           | 95.0                                         | 85       | 115         |      |          |      |
| Magnesium  | 50     | 1.0    | 50.00                    | 0           | 101                                          | 85       | 115         |      |          |      |
| Manganese  | 0.46   | 0.0020 | 0.5000                   | 0           | 92.3                                         | 85       | 115         |      |          |      |
| Nickel     | 0.46   | 0.010  | 0.5000                   | 0           | 91.8                                         | 85       | 115         |      |          |      |
| Potassium  | 48     | 1.0    | 50.00                    | 0           | 96.3                                         | 85       | 115         |      |          |      |
| Silver     | 0.099  | 0.0050 | 0.1000                   | 0           | 99.0                                         | 85       | 115         |      |          |      |
| Sodium     | 49     | 1.0    | 50.00                    | 0           | 98.9                                         | 85       | 115         |      |          |      |
| Vanadium   | 0.50   | 0.050  | 0.5000                   | 0           | 101                                          | 85       | 115         |      |          |      |
| Zinc       | 0.47   | 0.010  | 0.5000                   | 0           | 94.8                                         | 85       | 115         |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** Group 9

| Sample ID  | <b>1409E15-001GMS</b> |        | SampType:      | <b>MS</b>        |      | TestCode: | <b>EPA Method 200.7: Total Metals</b> |      |                    |      |
|------------|-----------------------|--------|----------------|------------------|------|-----------|---------------------------------------|------|--------------------|------|
| Client ID: | <b>SWMU 13 EB01</b>   |        | Batch ID:      | <b>15608</b>     |      | RunNo:    | <b>21558</b>                          |      |                    |      |
| Prep Date: | <b>9/30/2014</b>      |        | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>631330</b>                         |      | Units: <b>mg/L</b> |      |
| Analyte    | Result                | PQL    | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                             | %RPD | RPDLimit           | Qual |
| Barium     | 0.51                  | 0.0020 | 0.5000         | 0                | 101  | 70        | 130                                   |      |                    |      |
| Beryllium  | 0.52                  | 0.0020 | 0.5000         | 0                | 104  | 70        | 130                                   |      |                    |      |
| Cadmium    | 0.51                  | 0.0020 | 0.5000         | 0                | 101  | 70        | 130                                   |      |                    |      |
| Calcium    | 53                    | 1.0    | 50.00          | 0                | 106  | 70        | 130                                   |      |                    |      |
| Chromium   | 0.49                  | 0.0060 | 0.5000         | 0                | 97.7 | 70        | 130                                   |      |                    |      |
| Cobalt     | 0.50                  | 0.0060 | 0.5000         | 0                | 101  | 70        | 130                                   |      |                    |      |
| Iron       | 0.51                  | 0.020  | 0.5000         | 0                | 102  | 70        | 130                                   |      |                    |      |
| Lead       | 0.52                  | 0.0050 | 0.5000         | 0                | 103  | 70        | 130                                   |      |                    |      |
| Magnesium  | 52                    | 1.0    | 50.00          | 0                | 104  | 70        | 130                                   |      |                    |      |
| Manganese  | 0.51                  | 0.0020 | 0.5000         | 0                | 103  | 70        | 130                                   |      |                    |      |
| Nickel     | 0.50                  | 0.010  | 0.5000         | 0                | 100  | 70        | 130                                   |      |                    |      |
| Potassium  | 53                    | 1.0    | 50.00          | 0.3578           | 105  | 70        | 130                                   |      |                    |      |
| Silver     | 0.11                  | 0.0050 | 0.1000         | 0                | 105  | 70        | 130                                   |      |                    |      |
| Vanadium   | 0.52                  | 0.050  | 0.5000         | 0                | 103  | 70        | 130                                   |      |                    |      |

| Sample ID  | <b>1409E15-001GMSD</b> |        | SampType:      | <b>MSD</b>       |      | TestCode: | <b>EPA Method 200.7: Total Metals</b> |       |                    |      |
|------------|------------------------|--------|----------------|------------------|------|-----------|---------------------------------------|-------|--------------------|------|
| Client ID: | <b>SWMU 13 EB01</b>    |        | Batch ID:      | <b>15608</b>     |      | RunNo:    | <b>21558</b>                          |       |                    |      |
| Prep Date: | <b>9/30/2014</b>       |        | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>631331</b>                         |       | Units: <b>mg/L</b> |      |
| Analyte    | Result                 | PQL    | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                             | %RPD  | RPDLimit           | Qual |
| Barium     | 0.51                   | 0.0020 | 0.5000         | 0                | 102  | 70        | 130                                   | 0.781 | 20                 |      |
| Beryllium  | 0.52                   | 0.0020 | 0.5000         | 0                | 104  | 70        | 130                                   | 0.457 | 20                 |      |
| Cadmium    | 0.51                   | 0.0020 | 0.5000         | 0                | 102  | 70        | 130                                   | 1.18  | 20                 |      |
| Calcium    | 53                     | 1.0    | 50.00          | 0                | 106  | 70        | 130                                   | 0.117 | 20                 |      |
| Chromium   | 0.49                   | 0.0060 | 0.5000         | 0                | 98.7 | 70        | 130                                   | 0.982 | 20                 |      |
| Cobalt     | 0.51                   | 0.0060 | 0.5000         | 0                | 102  | 70        | 130                                   | 1.23  | 20                 |      |
| Iron       | 0.51                   | 0.020  | 0.5000         | 0                | 102  | 70        | 130                                   | 0.397 | 20                 |      |
| Lead       | 0.51                   | 0.0050 | 0.5000         | 0                | 103  | 70        | 130                                   | 0.523 | 20                 |      |
| Magnesium  | 52                     | 1.0    | 50.00          | 0                | 104  | 70        | 130                                   | 0.142 | 20                 |      |
| Manganese  | 0.52                   | 0.0020 | 0.5000         | 0                | 104  | 70        | 130                                   | 0.944 | 20                 |      |
| Nickel     | 0.51                   | 0.010  | 0.5000         | 0                | 101  | 70        | 130                                   | 1.10  | 20                 |      |
| Potassium  | 53                     | 1.0    | 50.00          | 0.3578           | 106  | 70        | 130                                   | 0.623 | 20                 |      |
| Silver     | 0.11                   | 0.0050 | 0.1000         | 0                | 107  | 70        | 130                                   | 1.31  | 20                 |      |
| Vanadium   | 0.52                   | 0.050  | 0.5000         | 0                | 104  | 70        | 130                                   | 0.618 | 20                 |      |

| Sample ID  | <b>MB-15608</b>  |     | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 200.7: Total Metals</b> |      |                    |      |
|------------|------------------|-----|----------------|------------------|------|-----------|---------------------------------------|------|--------------------|------|
| Client ID: | <b>PBW</b>       |     | Batch ID:      | <b>15608</b>     |      | RunNo:    | <b>21558</b>                          |      |                    |      |
| Prep Date: | <b>9/30/2014</b> |     | Analysis Date: | <b>9/30/2014</b> |      | SeqNo:    | <b>631361</b>                         |      | Units: <b>mg/L</b> |      |
| Analyte    | Result           | PQL | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                             | %RPD | RPDLimit           | Qual |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|            |           |        |                          |             |                                          |          |             |      |          |      |
|------------|-----------|--------|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB-15608  |        | SampType: MBLK           |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | PBW       |        | Batch ID: 15608          |             | RunNo: 21558                             |          |             |      |          |      |
| Prep Date: | 9/30/2014 |        | Analysis Date: 9/30/2014 |             | SeqNo: 631361                            |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL    | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Beryllium  | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Cadmium    | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Calcium    | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Chromium   | ND        | 0.0060 |                          |             |                                          |          |             |      |          |      |
| Cobalt     | ND        | 0.0060 |                          |             |                                          |          |             |      |          |      |
| Iron       | ND        | 0.020  |                          |             |                                          |          |             |      |          |      |
| Lead       | ND        | 0.0050 |                          |             |                                          |          |             |      |          |      |
| Magnesium  | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Manganese  | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Nickel     | ND        | 0.010  |                          |             |                                          |          |             |      |          |      |
| Potassium  | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Silver     | ND        | 0.0050 |                          |             |                                          |          |             |      |          |      |
| Sodium     | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Vanadium   | ND        | 0.050  |                          |             |                                          |          |             |      |          |      |
| Zinc       | ND        | 0.010  |                          |             |                                          |          |             |      |          |      |

|            |           |        |                          |             |                                          |          |             |      |          |      |
|------------|-----------|--------|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS-15608 |        | SampType: LCS            |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | LCSW      |        | Batch ID: 15608          |             | RunNo: 21558                             |          |             |      |          |      |
| Prep Date: | 9/30/2014 |        | Analysis Date: 9/30/2014 |             | SeqNo: 631362                            |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL    | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | 0.52      | 0.0020 | 0.5000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Beryllium  | 0.52      | 0.0020 | 0.5000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Cadmium    | 0.52      | 0.0020 | 0.5000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Chromium   | 0.50      | 0.0060 | 0.5000                   | 0           | 100                                      | 85       | 115         |      |          |      |
| Cobalt     | 0.52      | 0.0060 | 0.5000                   | 0           | 105                                      | 85       | 115         |      |          |      |
| Iron       | 0.51      | 0.020  | 0.5000                   | 0           | 102                                      | 85       | 115         |      |          |      |
| Lead       | 0.51      | 0.0050 | 0.5000                   | 0           | 103                                      | 85       | 115         |      |          |      |
| Manganese  | 0.53      | 0.0020 | 0.5000                   | 0           | 106                                      | 85       | 115         |      |          |      |
| Nickel     | 0.52      | 0.010  | 0.5000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Silver     | 0.11      | 0.0050 | 0.1000                   | 0           | 106                                      | 85       | 115         |      |          |      |
| Vanadium   | 0.52      | 0.050  | 0.5000                   | 0           | 105                                      | 85       | 115         |      |          |      |
| Zinc       | 0.54      | 0.010  | 0.5000                   | 0           | 108                                      | 85       | 115         |      |          |      |

|            |            |     |                          |             |                                          |          |             |      |          |      |
|------------|------------|-----|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS2-15608 |     | SampType: LCS            |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | LCSW       |     | Batch ID: 15608          |             | RunNo: 21558                             |          |             |      |          |      |
| Prep Date: | 9/30/2014  |     | Analysis Date: 9/30/2014 |             | SeqNo: 631363                            |          | Units: mg/L |      |          |      |
| Analyte    | Result     | PQL | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** Group 9

|            |            |     |                          |             |                                          |          |             |      |          |      |
|------------|------------|-----|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS2-15608 |     | SampType: LCS            |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | LCSW       |     | Batch ID: 15608          |             | RunNo: 21558                             |          |             |      |          |      |
| Prep Date: | 9/30/2014  |     | Analysis Date: 9/30/2014 |             | SeqNo: 631363                            |          | Units: mg/L |      |          |      |
| Analyte    | Result     | PQL | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Calcium    | 52         | 1.0 | 50.00                    | 0           | 104                                      | 85       | 115         |      |          |      |
| Magnesium  | 53         | 1.0 | 50.00                    | 0           | 105                                      | 85       | 115         |      |          |      |
| Potassium  | 53         | 1.0 | 50.00                    | 0           | 105                                      | 85       | 115         |      |          |      |
| Sodium     | 54         | 1.0 | 50.00                    | 0           | 107                                      | 85       | 115         |      |          |      |

|            |                |       |                          |             |                                          |          |             |      |          |      |
|------------|----------------|-------|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | 1409E15-001GMS |       | SampType: MS             |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | SWMU 13 EB01   |       | Batch ID: 15608          |             | RunNo: 21589                             |          |             |      |          |      |
| Prep Date: | 9/30/2014      |       | Analysis Date: 10/1/2014 |             | SeqNo: 632793                            |          | Units: mg/L |      |          |      |
| Analyte    | Result         | PQL   | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Sodium     | 51             | 1.0   | 50.00                    | 0           | 102                                      | 70       | 130         |      |          |      |
| Zinc       | 0.46           | 0.010 | 0.5000                   | 0           | 92.7                                     | 70       | 130         |      |          |      |

|            |                 |       |                          |             |                                          |          |             |       |          |      |
|------------|-----------------|-------|--------------------------|-------------|------------------------------------------|----------|-------------|-------|----------|------|
| Sample ID  | 1409E15-001GMSD |       | SampType: MSD            |             | TestCode: EPA Method 200.7: Total Metals |          |             |       |          |      |
| Client ID: | SWMU 13 EB01    |       | Batch ID: 15608          |             | RunNo: 21589                             |          |             |       |          |      |
| Prep Date: | 9/30/2014       |       | Analysis Date: 10/1/2014 |             | SeqNo: 632794                            |          | Units: mg/L |       |          |      |
| Analyte    | Result          | PQL   | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD  | RPDLimit | Qual |
| Sodium     | 50              | 1.0   | 50.00                    | 0           | 101                                      | 70       | 130         | 0.664 | 20       |      |
| Zinc       | 0.46            | 0.010 | 0.5000                   | 0           | 92.5                                     | 70       | 130         | 0.160 | 20       |      |

### Qualifiers:

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- S Spike Recovery outside accepted recovery limits

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- P Sample pH greater than 2.
- RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** Group 9

|            |                |        |           |                |           |          |           |           |                             |      |        |      |
|------------|----------------|--------|-----------|----------------|-----------|----------|-----------|-----------|-----------------------------|------|--------|------|
| Sample ID  | 1409E15-001FMS |        |           | SampType:      | MS        |          |           | TestCode: | EPA 200.8: Dissolved Metals |      |        |      |
| Client ID: | SWMU 13 EB01   |        |           | Batch ID:      | R21559    |          |           | RunNo:    | 21559                       |      |        |      |
| Prep Date: |                |        |           | Analysis Date: | 9/30/2014 |          |           | SeqNo:    | 631536                      |      | Units: | mg/L |
| Analyte    | Result         | PQL    | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD      | RPDLimit                    | Qual |        |      |
| Arsenic    | 0.022          | 0.0010 | 0.02500   | 0              | 86.9      | 70       | 130       |           |                             |      |        |      |

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

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

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

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

|            |        |        |           |                |           |          |           |           |                             |      |        |      |
|------------|--------|--------|-----------|----------------|-----------|----------|-----------|-----------|-----------------------------|------|--------|------|
| Sample ID  | LCS    |        |           | SampType:      | LCS       |          |           | TestCode: | EPA 200.8: Dissolved Metals |      |        |      |
| Client ID: | LCSW   |        |           | Batch ID:      | R21702    |          |           | RunNo:    | 21702                       |      |        |      |
| Prep Date: |        |        |           | Analysis Date: | 10/6/2014 |          |           | SeqNo:    | 637046                      |      | Units: | mg/L |
| Analyte    | Result | PQL    | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD      | RPDLimit                    | Qual |        |      |
| Antimony   | 0.024  | 0.0010 | 0.02500   | 0              | 95.6      | 85       | 115       |           |                             |      |        |      |
| Selenium   | 0.023  | 0.0010 | 0.02500   | 0              | 91.3      | 85       | 115       |           |                             |      |        |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|            |        |                |           |             |                             |          |           |      |          |      |
|------------|--------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID  | MB     | SampType:      | MBLK      | TestCode:   | EPA 200.8: Dissolved Metals |          |           |      |          |      |
| Client ID: | PBW    | Batch ID:      | R21702    | RunNo:      | 21702                       |          |           |      |          |      |
| Prep Date: |        | Analysis Date: | 10/6/2014 | SeqNo:      | 637048                      | Units:   | mg/L      |      |          |      |
| Analyte    | Result | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony   | ND     | 0.0010         |           |             |                             |          |           |      |          |      |
| Selenium   | ND     | 0.0010         |           |             |                             |          |           |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|            |             |        |                          |             |                                    |          |             |      |          |      |
|------------|-------------|--------|--------------------------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LLLCS-15608 |        | SampType: LCSLL          |             | TestCode: 200.8 ICPMS Metals:Total |          |             |      |          |      |
| Client ID: | BatchQC     |        | Batch ID: 15608          |             | RunNo: 21584                       |          |             |      |          |      |
| Prep Date: | 9/30/2014   |        | Analysis Date: 10/1/2014 |             | SeqNo: 632578                      |          | Units: mg/L |      |          |      |
| Analyte    | Result      | PQL    | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Antimony   | 0.026       | 0.0010 | 0.02500                  | 0           | 103                                | 85       | 115         |      |          |      |
| Arsenic    | 0.025       | 0.0010 | 0.02500                  | 0           | 99.8                               | 85       | 115         |      |          |      |
| Selenium   | 0.024       | 0.0010 | 0.02500                  | 0           | 96.0                               | 85       | 115         |      |          |      |

|            |           |        |                          |             |                                    |          |             |      |          |      |
|------------|-----------|--------|--------------------------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB-15608  |        | SampType: MBLK           |             | TestCode: 200.8 ICPMS Metals:Total |          |             |      |          |      |
| Client ID: | PBW       |        | Batch ID: 15608          |             | RunNo: 21584                       |          |             |      |          |      |
| Prep Date: | 9/30/2014 |        | Analysis Date: 10/1/2014 |             | SeqNo: 632582                      |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL    | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Antimony   | ND        | 0.0010 |                          |             |                                    |          |             |      |          |      |
| Arsenic    | ND        | 0.0010 |                          |             |                                    |          |             |      |          |      |
| Selenium   | ND        | 0.0010 |                          |             |                                    |          |             |      |          |      |

### Qualifiers:

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E Value above quantitation range  
J Analyte detected below quantitation limits  
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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|            |           |         |                          |             |                                     |          |             |      |          |      |
|------------|-----------|---------|--------------------------|-------------|-------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB-15783  |         | SampType: MBLK           |             | TestCode: EPA Method 245.1: Mercury |          |             |      |          |      |
| Client ID: | PBW       |         | Batch ID: 15783          |             | RunNo: 21753                        |          |             |      |          |      |
| Prep Date: | 10/8/2014 |         | Analysis Date: 10/8/2014 |             | SeqNo: 639057                       |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Mercurv    | ND        | 0.00020 |                          |             |                                     |          |             |      |          |      |

|            |           |         |           |                |           |          |           |           |                           |      |  |
|------------|-----------|---------|-----------|----------------|-----------|----------|-----------|-----------|---------------------------|------|--|
| Sample ID  | LCS-15783 |         |           | SampType:      | LCS       |          |           | TestCode: | EPA Method 245.1: Mercury |      |  |
| Client ID: | LCSW      |         |           | Batch ID:      | 15783     |          |           | RunNo:    | 21753                     |      |  |
| Prep Date: | 10/8/2014 |         |           | Analysis Date: | 10/8/2014 |          |           | SeqNo:    | 639058                    |      |  |
|            |           |         |           |                |           |          |           | Units:    | mg/L                      |      |  |
| Analyte    | Result    | PQL     | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD      | RPDLimit                  | Qual |  |
| Mercury    | 0.0056    | 0.00020 | 0.005000  | 0              | 113       | 80       | 120       |           |                           |      |  |

### Qualifiers:

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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|            |            |      |                                 |             |      |                                           |           |                    |          |      |
|------------|------------|------|---------------------------------|-------------|------|-------------------------------------------|-----------|--------------------|----------|------|
| Sample ID  | <b>MB</b>  |      | SampType: <b>MBLK</b>           |             |      | TestCode: <b>EPA Method 300.0: Anions</b> |           |                    |          |      |
| Client ID: | <b>PBW</b> |      | Batch ID: <b>R21543</b>         |             |      | RunNo: <b>21543</b>                       |           |                    |          |      |
| Prep Date: |            |      | Analysis Date: <b>9/29/2014</b> |             |      | SeqNo: <b>630693</b>                      |           | Units: <b>mg/L</b> |          |      |
| Analyte    | Result     | PQL  | SPK value                       | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD               | RPDLimit | Qual |
| Chloride   | ND         | 0.50 |                                 |             |      |                                           |           |                    |          |      |
| Sulfate    | ND         | 0.50 |                                 |             |      |                                           |           |                    |          |      |

|            |             |      |                                 |             |      |                                           |           |                    |          |      |
|------------|-------------|------|---------------------------------|-------------|------|-------------------------------------------|-----------|--------------------|----------|------|
| Sample ID  | <b>LCS</b>  |      | SampType: <b>LCS</b>            |             |      | TestCode: <b>EPA Method 300.0: Anions</b> |           |                    |          |      |
| Client ID: | <b>LCSW</b> |      | Batch ID: <b>R21543</b>         |             |      | RunNo: <b>21543</b>                       |           |                    |          |      |
| Prep Date: |             |      | Analysis Date: <b>9/29/2014</b> |             |      | SeqNo: <b>630694</b>                      |           | Units: <b>mg/L</b> |          |      |
| Analyte    | Result      | PQL  | SPK value                       | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD               | RPDLimit | Qual |
| Chloride   | 4.7         | 0.50 | 5.000                           | 0           | 93.1 | 90                                        | 110       |                    |          |      |
| Sulfate    | 9.7         | 0.50 | 10.00                           | 0           | 97.0 | 90                                        | 110       |                    |          |      |

|                      |            |      |                                 |             |      |                                           |           |                    |          |      |
|----------------------|------------|------|---------------------------------|-------------|------|-------------------------------------------|-----------|--------------------|----------|------|
| Sample ID            | <b>MB</b>  |      | SampType: <b>MBLK</b>           |             |      | TestCode: <b>EPA Method 300.0: Anions</b> |           |                    |          |      |
| Client ID:           | <b>PBW</b> |      | Batch ID: <b>R21564</b>         |             |      | RunNo: <b>21564</b>                       |           |                    |          |      |
| Prep Date:           |            |      | Analysis Date: <b>9/30/2014</b> |             |      | SeqNo: <b>631670</b>                      |           | Units: <b>mg/L</b> |          |      |
| Analyte              | Result     | PQL  | SPK value                       | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD               | RPDLimit | Qual |
| Nitrate+Nitrite as N | ND         | 0.20 |                                 |             |      |                                           |           |                    |          |      |

|                      |             |      |                                 |             |      |                                           |           |                    |          |      |
|----------------------|-------------|------|---------------------------------|-------------|------|-------------------------------------------|-----------|--------------------|----------|------|
| Sample ID            | <b>LCS</b>  |      | SampType: <b>LCS</b>            |             |      | TestCode: <b>EPA Method 300.0: Anions</b> |           |                    |          |      |
| Client ID:           | <b>LCSW</b> |      | Batch ID: <b>R21564</b>         |             |      | RunNo: <b>21564</b>                       |           |                    |          |      |
| Prep Date:           |             |      | Analysis Date: <b>9/30/2014</b> |             |      | SeqNo: <b>631671</b>                      |           | Units: <b>mg/L</b> |          |      |
| Analyte              | Result      | PQL  | SPK value                       | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD               | RPDLimit | Qual |
| Nitrate+Nitrite as N | 3.4         | 0.20 | 3.500                           | 0           | 98.5 | 90                                        | 110       |                    |          |      |

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S Spike Recovery outside accepted recovery limits

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** Group 9

| Sample ID <b>MB-15594</b>      | SampType: <b>MBLK</b>           |     | TestCode: <b>EPA Method 8015D: Diesel Range</b> |             |                    |          |           |      |          |      |
|--------------------------------|---------------------------------|-----|-------------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b>          | Batch ID: <b>15594</b>          |     | RunNo: <b>21572</b>                             |             |                    |          |           |      |          |      |
| Prep Date: <b>9/29/2014</b>    | Analysis Date: <b>10/1/2014</b> |     | SeqNo: <b>632217</b>                            |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                        | Result                          | PQL | SPK value                                       | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND                              | 1.0 |                                                 |             |                    |          |           |      |          |      |
| Motor Oil Range Organics (MRO) | ND                              | 5.0 |                                                 |             |                    |          |           |      |          |      |
| Surr: DNOP                     | 1.2                             |     | 1.000                                           |             | 116                | 59       | 141       |      |          |      |

| Sample ID <b>LCS-15594</b>  | SampType: <b>LCS</b>            |     | TestCode: <b>EPA Method 8015D: Diesel Range</b> |             |                    |          |           |      |          |      |
|-----------------------------|---------------------------------|-----|-------------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>LCSW</b>      | Batch ID: <b>15594</b>          |     | RunNo: <b>21572</b>                             |             |                    |          |           |      |          |      |
| Prep Date: <b>9/29/2014</b> | Analysis Date: <b>10/1/2014</b> |     | SeqNo: <b>632218</b>                            |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                     | Result                          | PQL | SPK value                                       | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 5.2                             | 1.0 | 5.000                                           | 0           | 103                | 69.7     | 142       |      |          |      |
| Surr: DNOP                  | 0.55                            |     | 0.5000                                          |             | 109                | 59       | 141       |      |          |      |

| Sample ID <b>1409E15-001CMS</b> | SampType: <b>MS</b>             |     | TestCode: <b>EPA Method 8015D: Diesel Range</b> |             |                    |          |           |      |          |      |
|---------------------------------|---------------------------------|-----|-------------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>SWMU 13 EB01</b>  | Batch ID: <b>15594</b>          |     | RunNo: <b>21572</b>                             |             |                    |          |           |      |          |      |
| Prep Date: <b>10/1/2014</b>     | Analysis Date: <b>10/1/2014</b> |     | SeqNo: <b>633772</b>                            |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                         | Result                          | PQL | SPK value                                       | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)     | 4.7                             | 1.0 | 5.000                                           | 0           | 93.4               | 55       | 159       |      |          |      |
| Surr: DNOP                      | 0.49                            |     | 0.5000                                          |             | 98.3               | 59       | 141       |      |          |      |

| Sample ID <b>1409E15-001CMSD</b> | SampType: <b>MSD</b>            |     | TestCode: <b>EPA Method 8015D: Diesel Range</b> |             |                    |          |           |      |          |      |
|----------------------------------|---------------------------------|-----|-------------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>SWMU 13 EB01</b>   | Batch ID: <b>15594</b>          |     | RunNo: <b>21572</b>                             |             |                    |          |           |      |          |      |
| Prep Date: <b>10/1/2014</b>      | Analysis Date: <b>10/1/2014</b> |     | SeqNo: <b>633773</b>                            |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                          | Result                          | PQL | SPK value                                       | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)      | 5.3                             | 1.0 | 5.000                                           | 0           | 106                | 55       | 159       | 12.9 | 20       |      |
| Surr: DNOP                       | 0.54                            |     | 0.5000                                          |             | 109                | 59       | 141       | 0    | 0        |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|                               |                                 |       |           |                                                   |      |                    |           |      |          |      |
|-------------------------------|---------------------------------|-------|-----------|---------------------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID <b>B23</b>          | SampType: <b>MBLK</b>           |       |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                    |           |      |          |      |
| Client ID: <b>PBW</b>         | Batch ID: <b>R21528</b>         |       |           | RunNo: <b>21528</b>                               |      |                    |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/29/2014</b> |       |           | SeqNo: <b>629902</b>                              |      | Units: <b>mg/L</b> |           |      |          |      |
| Analyte                       | Result                          | PQL   | SPK value | SPK Ref Val                                       | %REC | LowLimit           | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 0.050 |           |                                                   |      |                    |           |      |          |      |
| Surr: BFB                     | 18                              |       | 20.00     |                                                   | 90.2 | 70.9               | 130       |      |          |      |

|                                |                                 |       |           |                                                   |      |                    |           |      |          |      |
|--------------------------------|---------------------------------|-------|-----------|---------------------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID <b>2.5UG GRO LCS</b> | SampType: <b>LCS</b>            |       |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                    |           |      |          |      |
| Client ID: <b>LCSW</b>         | Batch ID: <b>R21528</b>         |       |           | RunNo: <b>21528</b>                               |      |                    |           |      |          |      |
| Prep Date:                     | Analysis Date: <b>9/29/2014</b> |       |           | SeqNo: <b>629903</b>                              |      | Units: <b>mg/L</b> |           |      |          |      |
| Analyte                        | Result                          | PQL   | SPK value | SPK Ref Val                                       | %REC | LowLimit           | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)  | 0.46                            | 0.050 | 0.5000    | 0                                                 | 93.0 | 80                 | 120       |      |          |      |
| Surr: BFB                      | 20                              |       | 20.00     |                                                   | 99.1 | 70.9               | 130       |      |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|                                |        |                |           |             |                             |          |           |      |          |      |
|--------------------------------|--------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                      | 5ml-rb | SampType:      | MBLK      | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:                     | PBW    | Batch ID:      | R21596    | RunNo:      | 21596                       |          |           |      |          |      |
| Prep Date:                     |        | Analysis Date: | 10/1/2014 | SeqNo:      | 633038                      | Units:   | µg/L      |      |          |      |
| Analyte                        | Result | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene                        | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Toluene                        | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Ethylbenzene                   | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2,4-Trimethylbenzene         | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,3,5-Trimethylbenzene         | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Naphthalene                    | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| 1-Methylnaphthalene            | ND     | 4.0            |           |             |                             |          |           |      |          |      |
| 2-Methylnaphthalene            | ND     | 4.0            |           |             |                             |          |           |      |          |      |
| Acetone                        | ND     | 10             |           |             |                             |          |           |      |          |      |
| Bromobenzene                   | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Bromodichloromethane           | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Bromoform                      | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Bromomethane                   | ND     | 3.0            |           |             |                             |          |           |      |          |      |
| 2-Butanone                     | ND     | 10             |           |             |                             |          |           |      |          |      |
| Carbon disulfide               | ND     | 10             |           |             |                             |          |           |      |          |      |
| Carbon Tetrachloride           | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Chlorobenzene                  | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Chloroethane                   | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| Chloroform                     | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Chloromethane                  | ND     | 3.0            |           |             |                             |          |           |      |          |      |
| 2-Chlorotoluene                | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 4-Chlorotoluene                | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| cis-1,2-DCE                    | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| cis-1,3-Dichloropropene        | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| Dibromochloromethane           | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Dibromomethane                 | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2-Dichlorobenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,3-Dichlorobenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,4-Dichlorobenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Dichlorodifluoromethane        | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1-Dichloroethane             | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1-Dichloroethene             | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2-Dichloropropane            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,3-Dichloropropane            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 2,2-Dichloropropane            | ND     | 2.0            |           |             |                             |          |           |      |          |      |

### Qualifiers:

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|                             |        |                |           |             |                             |          |           |      |          |      |
|-----------------------------|--------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                   | 5ml-rb | SampType:      | MBLK      | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:                  | PBW    | Batch ID:      | R21596    | RunNo:      | 21596                       |          |           |      |          |      |
| Prep Date:                  |        | Analysis Date: | 10/1/2014 | SeqNo:      | 633038                      | Units:   | µg/L      |      |          |      |
| Analyte                     | Result | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1-Dichloropropene         | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Hexachlorobutadiene         | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 2-Hexanone                  | ND     | 10             |           |             |                             |          |           |      |          |      |
| Isopropylbenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 4-Isopropyltoluene          | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 4-Methyl-2-pentanone        | ND     | 10             |           |             |                             |          |           |      |          |      |
| Methylene Chloride          | ND     | 3.0            |           |             |                             |          |           |      |          |      |
| n-Butylbenzene              | ND     | 3.0            |           |             |                             |          |           |      |          |      |
| n-Propylbenzene             | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| sec-Butylbenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Styrene                     | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| tert-Butylbenzene           | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| Tetrachloroethene (PCE)     | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| trans-1,2-DCE               | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| trans-1,3-Dichloropropene   | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichlorobenzene      | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2,4-Trichlorobenzene      | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,1-Trichloroethane       | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,2-Trichloroethane       | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Trichloroethene (TCE)       | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Trichlorofluoromethane      | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichloropropane      | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| Vinyl chloride              | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Xylenes, Total              | ND     | 1.5            |           |             |                             |          |           |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 8.4    |                | 10.00     |             | 84.3                        | 70       | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene  | 10     |                | 10.00     |             | 103                         | 70       | 130       |      |          |      |
| Surr: Dibromofluoromethane  | 8.7    |                | 10.00     |             | 86.6                        | 70       | 130       |      |          |      |
| Surr: Toluene-d8            | 9.6    |                | 10.00     |             | 96.2                        | 70       | 130       |      |          |      |

|               |           |                |           |             |                             |          |           |      |          |      |
|---------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID     | 100ng lcs | SampType:      | LCS       | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:    | LCSW      | Batch ID:      | R21596    | RunNo:      | 21596                       |          |           |      |          |      |
| Prep Date:    |           | Analysis Date: | 10/1/2014 | SeqNo:      | 633041                      | Units:   | µg/L      |      |          |      |
| Analyte       | Result    | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene       | 22        | 1.0            | 20.00     | 0           | 109                         | 70       | 130       |      |          |      |
| Toluene       | 21        | 1.0            | 20.00     | 0           | 103                         | 80       | 120       |      |          |      |
| Chlorobenzene | 21        | 1.0            | 20.00     | 0           | 105                         | 70       | 130       |      |          |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|                             |           |                          |           |             |                                       |          |             |      |          |      |
|-----------------------------|-----------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID                   | 100ng lcs | SampType: LCS            |           |             | TestCode: EPA Method 8260B: VOLATILES |          |             |      |          |      |
| Client ID:                  | LCSW      | Batch ID: R21596         |           |             | RunNo: 21596                          |          |             |      |          |      |
| Prep Date:                  |           | Analysis Date: 10/1/2014 |           |             | SeqNo: 633041                         |          | Units: µg/L |      |          |      |
| Analyte                     | Result    | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 25        | 1.0                      | 20.00     | 0           | 123                                   | 82.6     | 131         |      |          |      |
| Trichloroethene (TCE)       | 20        | 1.0                      | 20.00     | 0           | 97.9                                  | 70       | 130         |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 8.6       |                          | 10.00     |             | 85.6                                  | 70       | 130         |      |          |      |
| Surr: 4-Bromofluorobenzene  | 10        |                          | 10.00     |             | 101                                   | 70       | 130         |      |          |      |
| Surr: Dibromofluoromethane  | 9.3       |                          | 10.00     |             | 93.2                                  | 70       | 130         |      |          |      |
| Surr: Toluene-d8            | 9.1       |                          | 10.00     |             | 91.1                                  | 70       | 130         |      |          |      |

### Qualifiers:

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# QC SUMMARY REPORT

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WO#: 1409E15

27-Oct-14

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Project: Group 9

|                             |           |     |                          |             |                                           |          |             |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                   | mb-15605  |     | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                  | PBW       |     | Batch ID: 15605          |             | RunNo: 21556                              |          |             |      |          |      |
| Prep Date:                  | 9/30/2014 |     | Analysis Date: 9/30/2014 |             | SeqNo: 631137                             |          | Units: µg/L |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Acenaphthylene              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Aniline                     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Anthracene                  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Azobenzene                  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benz(a)anthracene           | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(a)pyrene              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(b)fluoranthene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(k)fluoranthene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzoic acid                | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| Benzyl alcohol              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Butyl benzyl phthalate      | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Carbazole                   | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Chloroaniline             | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2-Chloronaphthalene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2-Chlorophenol              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Chrysene                    | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Di-n-butyl phthalate        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Di-n-octyl phthalate        | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Dibenzofuran                | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Diethyl phthalate           | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Dimethyl phthalate          | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2,4-Dichlorophenol          | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| 2,4-Dimethylphenol          | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| 2,4-Dinitrophenol           | ND        | 20  |                          |             |                                           |          |             |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15605  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBW       | Batch ID:      | 15605     | RunNo:      | 21556                           |          |           |      |          |      |
| Prep Date:                 | 9/30/2014 | Analysis Date: | 9/30/2014 | SeqNo:      | 631137                          | Units:   | µg/L      |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 20             |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 10             |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 10             |           |             |                                 |          |           |      |          |      |
| N-Nitrosodimethylamine     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 20             |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 130       |                | 200.0     |             | 66.8                            | 12.1     | 85.8      |      |          |      |
| Surr: Phenol-d5            | 120       |                | 200.0     |             | 59.1                            | 17.7     | 65.8      |      |          |      |
| Surr: 2,4,6-Tribromophenol | 140       |                | 200.0     |             | 72.2                            | 26       | 138       |      |          |      |
| Surr: Nitrobenzene-d5      | 83        |                | 100.0     |             | 82.8                            | 47.5     | 119       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 72        |                | 100.0     |             | 71.7                            | 48.1     | 106       |      |          |      |
| Surr: 4-Terphenyl-d14      | 91        |                | 100.0     |             | 91.3                            | 44       | 113       |      |          |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|                            |           |     |                          |             |                                           |          |             |      |          |      |
|----------------------------|-----------|-----|--------------------------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | Ics-15605 |     | SampType: LCS            |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                 | LCSW      |     | Batch ID: 15605          |             | RunNo: 21556                              |          |             |      |          |      |
| Prep Date:                 | 9/30/2014 |     | Analysis Date: 9/30/2014 |             | SeqNo: 631138                             |          | Units: µg/L |      |          |      |
| Analyte                    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Acenaphthene               | 71        | 10  | 100.0                    | 0           | 70.8                                      | 47.9     | 114         |      |          |      |
| 4-Chloro-3-methylphenol    | 160       | 10  | 200.0                    | 0           | 78.9                                      | 51.7     | 122         |      |          |      |
| 2-Chlorophenol             | 140       | 10  | 200.0                    | 0           | 69.5                                      | 40.7     | 113         |      |          |      |
| 1,4-Dichlorobenzene        | 68        | 10  | 100.0                    | 0           | 67.5                                      | 39.6     | 99.9        |      |          |      |
| 2,4-Dinitrotoluene         | 61        | 10  | 100.0                    | 0           | 60.7                                      | 40.8     | 113         |      |          |      |
| N-Nitrosodi-n-propylamine  | 68        | 10  | 100.0                    | 0           | 67.5                                      | 51.2     | 111         |      |          |      |
| 4-Nitrophenol              | 87        | 10  | 200.0                    | 0           | 43.3                                      | 15.7     | 86.9        |      |          |      |
| Pentachlorophenol          | 88        | 20  | 200.0                    | 0           | 44.0                                      | 21.6     | 104         |      |          |      |
| Phenol                     | 110       | 10  | 200.0                    | 0           | 53.6                                      | 28.6     | 71.7        |      |          |      |
| Pyrene                     | 76        | 10  | 100.0                    | 0           | 76.1                                      | 54.2     | 128         |      |          |      |
| 1,2,4-Trichlorobenzene     | 74        | 10  | 100.0                    | 0           | 74.4                                      | 40.9     | 101         |      |          |      |
| Surr: 2-Fluorophenol       | 100       |     | 200.0                    |             | 51.2                                      | 12.1     | 85.8        |      |          |      |
| Surr: Phenol-d5            | 95        |     | 200.0                    |             | 47.3                                      | 17.7     | 65.8        |      |          |      |
| Surr: 2,4,6-Tribromophenol | 150       |     | 200.0                    |             | 73.2                                      | 26       | 138         |      |          |      |
| Surr: Nitrobenzene-d5      | 73        |     | 100.0                    |             | 72.9                                      | 47.5     | 119         |      |          |      |
| Surr: 2-Fluorobiphenyl     | 73        |     | 100.0                    |             | 73.3                                      | 48.1     | 106         |      |          |      |
| Surr: 4-Terphenyl-d14      | 84        |     | 100.0                    |             | 83.7                                      | 44       | 113         |      |          |      |

|                            |                |                          |           |             |                                           |          |             |      |          |      |
|----------------------------|----------------|--------------------------|-----------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | 1409E15-001Dms | SampType: MS             |           |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                 | SWMU 13 EB01   | Batch ID: 15605          |           |             | RunNo: 21556                              |          |             |      |          |      |
| Prep Date:                 | 9/30/2014      | Analysis Date: 9/30/2014 |           |             | SeqNo: 631146                             |          | Units: µg/L |      |          |      |
| Analyte                    | Result         | PQL                      | SPK value | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Acenaphthene               | 83             | 10                       | 100.0     | 0           | 82.9                                      | 52.5     | 94.5        |      |          |      |
| 4-Chloro-3-methylphenol    | 190            | 10                       | 200.0     | 0           | 93.2                                      | 45       | 103         |      |          |      |
| 2-Chlorophenol             | 160            | 10                       | 200.0     | 0           | 81.1                                      | 32.3     | 101         |      |          |      |
| 1,4-Dichlorobenzene        | 67             | 10                       | 100.0     | 0           | 67.1                                      | 34.5     | 97.5        |      |          |      |
| 2,4-Dinitrotoluene         | 71             | 10                       | 100.0     | 0           | 71.2                                      | 20.1     | 123         |      |          |      |
| N-Nitrosodi-n-propylamine  | 77             | 10                       | 100.0     | 0           | 77.2                                      | 26.9     | 131         |      |          |      |
| 4-Nitrophenol              | 100            | 10                       | 200.0     | 0           | 52.4                                      | 11.6     | 55.4        |      |          |      |
| Pentachlorophenol          | 69             | 20                       | 200.0     | 0           | 34.7                                      | 17.6     | 88.9        |      |          |      |
| Phenol                     | 130            | 10                       | 200.0     | 0           | 65.7                                      | 18.4     | 66.5        |      |          |      |
| Pyrene                     | 89             | 10                       | 100.0     | 0           | 89.2                                      | 43.1     | 111         |      |          |      |
| 1,2,4-Trichlorobenzene     | 71             | 10                       | 100.0     | 0           | 71.0                                      | 38.8     | 95.6        |      |          |      |
| Surr: 2-Fluorophenol       | 130            |                          | 200.0     |             | 64.4                                      | 12.1     | 85.8        |      |          |      |
| Surr: Phenol-d5            | 120            |                          | 200.0     |             | 59.6                                      | 17.7     | 65.8        |      |          |      |
| Surr: 2,4,6-Tribromophenol | 130            |                          | 200.0     |             | 62.5                                      | 26       | 138         |      |          |      |
| Surr: Nitrobenzene-d5      | 80             |                          | 100.0     |             | 80.3                                      | 47.5     | 119         |      |          |      |
| Surr: 2-Fluorobiphenyl     | 79             |                          | 100.0     |             | 79.1                                      | 48.1     | 106         |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** Group 9

|                       |                |                |           |             |                                 |          |           |      |          |      |
|-----------------------|----------------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID             | 1409E15-001Dms | SampType:      | MS        | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:            | SWMU 13 EB01   | Batch ID:      | 15605     | RunNo:      | 21556                           |          |           |      |          |      |
| Prep Date:            | 9/30/2014      | Analysis Date: | 9/30/2014 | SeqNo:      | 631146                          | Units:   | µg/L      |      |          |      |
| Analyte               | Result         | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Terphenyl-d14 | 87             |                | 100.0     |             | 87.3                            | 44       | 113       |      |          |      |

|                            |                 |                |           |             |                                 |          |           |        |          |      |
|----------------------------|-----------------|----------------|-----------|-------------|---------------------------------|----------|-----------|--------|----------|------|
| Sample ID                  | 1409E15-001Dmsd | SampType:      | MSD       | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |        |          |      |
| Client ID:                 | SWMU 13 EB01    | Batch ID:      | 15605     | RunNo:      | 21556                           |          |           |        |          |      |
| Prep Date:                 | 9/30/2014       | Analysis Date: | 9/30/2014 | SeqNo:      | 631147                          | Units:   | µg/L      |        |          |      |
| Analyte                    | Result          | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD   | RPDLimit | Qual |
| Acenaphthene               | 84              | 10             | 100.0     | 0           | 84.0                            | 52.5     | 94.5      | 1.29   | 20       |      |
| 4-Chloro-3-methylphenol    | 190             | 10             | 200.0     | 0           | 95.0                            | 45       | 103       | 1.91   | 20       |      |
| 2-Chlorophenol             | 170             | 10             | 200.0     | 0           | 84.9                            | 32.3     | 101       | 4.61   | 20       |      |
| 1,4-Dichlorobenzene        | 69              | 10             | 100.0     | 0           | 69.0                            | 34.5     | 97.5      | 2.85   | 20       |      |
| 2,4-Dinitrotoluene         | 76              | 10             | 100.0     | 0           | 76.1                            | 20.1     | 123       | 6.63   | 20       |      |
| N-Nitrosodi-n-propylamine  | 79              | 10             | 100.0     | 0           | 79.3                            | 26.9     | 131       | 2.71   | 20       |      |
| 4-Nitrophenol              | 110             | 10             | 200.0     | 0           | 55.3                            | 11.6     | 55.4      | 5.37   | 20       |      |
| Pentachlorophenol          | 76              | 20             | 200.0     | 0           | 37.8                            | 17.6     | 88.9      | 8.69   | 20       |      |
| Phenol                     | 130             | 10             | 200.0     | 0           | 64.6                            | 18.4     | 66.5      | 1.73   | 20       |      |
| Pyrene                     | 100             | 10             | 100.0     | 0           | 102                             | 43.1     | 111       | 13.7   | 20       |      |
| 1,2,4-Trichlorobenzene     | 71              | 10             | 100.0     | 0           | 71.1                            | 38.8     | 95.6      | 0.0563 | 20       |      |
| Surr: 2-Fluorophenol       | 130             |                | 200.0     |             | 63.3                            | 12.1     | 85.8      | 0      | 0        |      |
| Surr: Phenol-d5            | 120             |                | 200.0     |             | 57.6                            | 17.7     | 65.8      | 0      | 0        |      |
| Surr: 2,4,6-Tribromophenol | 130             |                | 200.0     |             | 67.4                            | 26       | 138       | 0      | 0        |      |
| Surr: Nitrobenzene-d5      | 81              |                | 100.0     |             | 80.5                            | 47.5     | 119       | 0      | 0        |      |
| Surr: 2-Fluorobiphenyl     | 77              |                | 100.0     |             | 76.8                            | 48.1     | 106       | 0      | 0        |      |
| Surr: 4-Terphenyl-d14      | 92              |                | 100.0     |             | 91.9                            | 44       | 113       | 0      | 0        |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** Group 9

| Sample ID <b>mb-1</b>       | SampType: <b>MBLK</b>           |     |           | TestCode: <b>SM2320B: Alkalinity</b> |      |                          |           |      |          |      |
|-----------------------------|---------------------------------|-----|-----------|--------------------------------------|------|--------------------------|-----------|------|----------|------|
| Client ID: <b>PBW</b>       | Batch ID: <b>R21535</b>         |     |           | RunNo: <b>21535</b>                  |      |                          |           |      |          |      |
| Prep Date:                  | Analysis Date: <b>9/29/2014</b> |     |           | SeqNo: <b>630555</b>                 |      | Units: <b>mg/L CaCO3</b> |           |      |          |      |
| Analyte                     | Result                          | PQL | SPK value | SPK Ref Val                          | %REC | LowLimit                 | HighLimit | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | ND                              | 20  |           |                                      |      |                          |           |      |          |      |

| Sample ID <b>lcs-1</b>      | SampType: <b>LCS</b>            |     |           | TestCode: <b>SM2320B: Alkalinity</b> |      |                          |           |      |          |      |
|-----------------------------|---------------------------------|-----|-----------|--------------------------------------|------|--------------------------|-----------|------|----------|------|
| Client ID: <b>LCSW</b>      | Batch ID: <b>R21535</b>         |     |           | RunNo: <b>21535</b>                  |      |                          |           |      |          |      |
| Prep Date:                  | Analysis Date: <b>9/29/2014</b> |     |           | SeqNo: <b>630556</b>                 |      | Units: <b>mg/L CaCO3</b> |           |      |          |      |
| Analyte                     | Result                          | PQL | SPK value | SPK Ref Val                          | %REC | LowLimit                 | HighLimit | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 76                              | 20  | 80.00     | 0                                    | 94.4 | 90                       | 110       |      |          |      |

| Sample ID <b>mb-2</b>       | SampType: <b>MBLK</b>           |     |           | TestCode: <b>SM2320B: Alkalinity</b> |      |                          |           |      |          |      |
|-----------------------------|---------------------------------|-----|-----------|--------------------------------------|------|--------------------------|-----------|------|----------|------|
| Client ID: <b>PBW</b>       | Batch ID: <b>R21535</b>         |     |           | RunNo: <b>21535</b>                  |      |                          |           |      |          |      |
| Prep Date:                  | Analysis Date: <b>9/29/2014</b> |     |           | SeqNo: <b>630572</b>                 |      | Units: <b>mg/L CaCO3</b> |           |      |          |      |
| Analyte                     | Result                          | PQL | SPK value | SPK Ref Val                          | %REC | LowLimit                 | HighLimit | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | ND                              | 20  |           |                                      |      |                          |           |      |          |      |

| Sample ID <b>lcs-2</b>      | SampType: <b>LCS</b>            |     |           | TestCode: <b>SM2320B: Alkalinity</b> |      |                          |           |      |          |      |
|-----------------------------|---------------------------------|-----|-----------|--------------------------------------|------|--------------------------|-----------|------|----------|------|
| Client ID: <b>LCSW</b>      | Batch ID: <b>R21535</b>         |     |           | RunNo: <b>21535</b>                  |      |                          |           |      |          |      |
| Prep Date:                  | Analysis Date: <b>9/29/2014</b> |     |           | SeqNo: <b>630573</b>                 |      | Units: <b>mg/L CaCO3</b> |           |      |          |      |
| Analyte                     | Result                          | PQL | SPK value | SPK Ref Val                          | %REC | LowLimit                 | HighLimit | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 82                              | 20  | 80.00     | 0                                    | 103  | 90                       | 110       |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E15

27-Oct-14

Client: Western Refining Southwest, Inc.

Project: Group 9

|                        |           |      |                |             |      |           |                                     |      |             |      |  |
|------------------------|-----------|------|----------------|-------------|------|-----------|-------------------------------------|------|-------------|------|--|
| Sample ID              | MB-15675  |      | SampType:      | MBLK        |      | TestCode: | SM2540C MOD: Total Dissolved Solids |      |             |      |  |
| Client ID:             | PBW       |      | Batch ID:      | 15675       |      | RunNo:    | 21661                               |      |             |      |  |
| Prep Date:             | 10/2/2014 |      | Analysis Date: | 10/3/2014   |      | SeqNo:    | 635473                              |      | Units: mg/L |      |  |
| Analyte                | Result    | PQL  | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                           | %RPD | RPDLimit    | Qual |  |
| Total Dissolved Solids | ND        | 20.0 |                |             |      |           |                                     |      |             |      |  |

|                        |           |      |                |             |      |           |                                     |      |             |      |  |
|------------------------|-----------|------|----------------|-------------|------|-----------|-------------------------------------|------|-------------|------|--|
| Sample ID              | LCS-15675 |      | SampType:      | LCS         |      | TestCode: | SM2540C MOD: Total Dissolved Solids |      |             |      |  |
| Client ID:             | LCSW      |      | Batch ID:      | 15675       |      | RunNo:    | 21661                               |      |             |      |  |
| Prep Date:             | 10/2/2014 |      | Analysis Date: | 10/3/2014   |      | SeqNo:    | 635474                              |      | Units: mg/L |      |  |
| Analyte                | Result    | PQL  | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                           | %RPD | RPDLimit    | Qual |  |
| Total Dissolved Solids | 1010      | 20.0 | 1000           | 0           | 101  | 80        | 120                                 |      |             |      |  |

### Qualifiers:

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

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



## Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409E15

RcptNo: 1

Received by/date:

Logged By:

Ashley Gallegos

9/27/2014 5:45:00 AM

Completed By:

Ashley Gallegos

9/27/2014 6:55:32 AM

Reviewed By:

IO

09/29/14

### Chain of Custody

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

### Log In

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

# of preserved bottles checked for pH: 6  
(<2 or >12 unless noted)  
Adjusted? Yes  
Checked by: [Signature]

### Special Handling (if applicable)

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

Person Notified:

Date

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.1     | Good      | Yes         |         |           |           |





# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                    | Analytical Method              |
|----------------------------|--------------------------------|
| Antimony                   | SW-846 method 6010/6020        |
| Arsenic                    | SW-846 method 6010/6020        |
| Barium                     | SW-846 method 6010/6020        |
| Beryllium                  | SW-846 method 6010/6020        |
| Cadmium                    | SW-846 method 6010/6020        |
| Chromium                   | SW-846 method 6010/6020        |
| <del>Chromium VI</del>     | <del>SW-846 method 6010A</del> |
| Cobalt                     | SW-846 method 6010/6020        |
| Cyanide                    | SW-846 method 335.4/335.2 mod  |
| Lead                       | SW-846 method 6010/6020        |
| <del>Tetraethyl lead</del> | <del>SW-846 method 6270C</del> |
| Mercury                    | SW-846 method 7470/7471        |
| Nickel                     | SW-846 method 6010/6020        |
| Selenium                   | SW-846 method 6010/6020        |
| Silver                     | SW-846 method 6010/6020        |
| Vanadium                   | SW-846 method 6010/6020        |
| Zinc                       | SW-846 method 6010/6020        |

# General Chemistry Parameters for Groundwater Samples

| Analyte                  | Analytical Method                     |
|--------------------------|---------------------------------------|
| Total Dissolved Solids ✓ | SM-2540C                              |
| Bicarbonate ✓            | SM-2320B                              |
| Chloride ✓               | EPA method 300.0                      |
| Sulfate ✓                | EPA method 300.0                      |
| Calcium                  | EPA method 6010/6020                  |
| Magnesium                | EPA method 6010/6020                  |
| Sodium                   | EPA method 6010/6020                  |
| Potassium                | EPA method 6010/6020                  |
| Manganese                | SW-846 method 6010/6020               |
| Nitrate/nitrite          | EPA method 300.0                      |
| Ferric/ferrous Iron      | SW-846 method 6010/6020 & SM 3500Fe2+ |



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

October 29, 2014

Kelly Robinson

Western Refining Southwest, Inc.  
#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409E41

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/27/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



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

## Case Narrative

WO#: 1409E41  
Date: 10/29/2014

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**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

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Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E41**

Date Reported: **10/29/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13 Dup 01

**Project:** GROUP 9

**Collection Date:** 9/26/2014

**Lab ID:** 1409E41-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 580    | 110      |      | mg/Kg-dry | 10 | 9/30/2014 8:59:27 PM  | 15573                |
| Motor Oil Range Organics (MRO)                 | 730    | 570      |      | mg/Kg-dry | 10 | 9/30/2014 8:59:27 PM  | 15573                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/30/2014 8:59:27 PM  | 15573                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 110    | 4.3      |      | mg/Kg-dry | 1  | 9/30/2014 12:10:17 AM | R21528               |
| Surr: BFB                                      | 690    | 80-120   | S    | %REC      | 1  | 9/30/2014 12:10:17 AM | R21528               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 12     | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 10/7/2014 1:21:45 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Arsenic                                        | 3.0    | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Barium                                         | 190    | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Beryllium                                      | 0.53   | 0.17     |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Chromium                                       | 8.4    | 0.34     |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Cobalt                                         | 4.9    | 0.34     |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Lead                                           | 6.9    | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Nickel                                         | 7.4    | 0.56     |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Vanadium                                       | 26     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| Zinc                                           | 34     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:24:31 PM  | 15704                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |
| Acenaphthylene                                 | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |
| Aniline                                        | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |
| Anthracene                                     | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |
| Azobenzene                                     | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |
| Benz(a)anthracene                              | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |
| Benzyl alcohol                                 | ND     | 0.46     |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E41

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13 Dup 01

**Project:** GROUP 9

**Collection Date:** 9/26/2014

**Lab ID:** 1409E41-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Carbazole                              | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Chrysene                               | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.91 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Dibenzofuran                           | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.91 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.69 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Fluoranthene                           | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Fluorene                               | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Hexachloroethane                       | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 3 of 18 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E41

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13 Dup 01

**Project:** GROUP 9

**Collection Date:** 9/26/2014

**Lab ID:** 1409E41-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 3+4-Methylphenol                       | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| N-Nitrosodi-n-propylamine              | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| N-Nitrosodiphenylamine                 | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Naphthalene                            | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2-Nitroaniline                         | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 3-Nitroaniline                         | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 4-Nitroaniline                         | ND     | 0.91      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Nitrobenzene                           | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2-Nitrophenol                          | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 4-Nitrophenol                          | ND     | 0.57      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Pentachlorophenol                      | ND     | 0.91      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Phenanthrene                           | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Phenol                                 | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Pyrene                                 | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Pyridine                               | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2,4,5-Trichlorophenol                  | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| 2,4,6-Trichlorophenol                  | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Surr: 2-Fluorophenol                   | 89.1   | 21-111    |      | %REC      | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Surr: Phenol-d5                        | 88.6   | 23.1-117  |      | %REC      | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Surr: 2,4,6-Tribromophenol             | 86.6   | 22.7-88.9 |      | %REC      | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Surr: Nitrobenzene-d5                  | 101    | 24.5-126  |      | %REC      | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Surr: 2-Fluorobiphenyl                 | 87.4   | 21.2-129  |      | %REC      | 1  | 10/1/2014 10:00:55 PM | 15576        |
| Surr: 4-Terphenyl-d14                  | 90.7   | 39.4-107  |      | %REC      | 1  | 10/1/2014 10:00:55 PM | 15576        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                       | Analyst: RAA |
| Benzene                                | 0.063  | 0.043     |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| Toluene                                | ND     | 0.043     |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| Ethylbenzene                           | 0.54   | 0.043     |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.043     |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| 1,2,4-Trimethylbenzene                 | 0.54   | 0.043     |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| 1,3,5-Trimethylbenzene                 | 0.26   | 0.043     |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| 1,2-Dichloroethane (EDC)               | ND     | 0.043     |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| 1,2-Dibromoethane (EDB)                | ND     | 0.043     |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| Naphthalene                            | ND     | 0.087     |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| 1-Methylnaphthalene                    | ND     | 0.17      |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| 2-Methylnaphthalene                    | ND     | 0.17      |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| Acetone                                | ND     | 0.65      |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |
| Bromobenzene                           | ND     | 0.043     |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM  | R21643       |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E41

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13 Dup 01

**Project:** GROUP 9

**Collection Date:** 9/26/2014

**Lab ID:** 1409E41-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|-------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Bromoform                          | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Bromomethane                       | ND     | 0.13  |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 2-Butanone                         | ND     | 0.43  |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Carbon disulfide                   | ND     | 0.43  |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Carbon tetrachloride               | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Chlorobenzene                      | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Chloroethane                       | ND     | 0.087 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Chloroform                         | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Chloromethane                      | ND     | 0.13  |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 2-Chlorotoluene                    | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 4-Chlorotoluene                    | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| cis-1,2-DCE                        | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| cis-1,3-Dichloropropene            | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.087 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Dibromochloromethane               | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Dibromomethane                     | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 1,2-Dichlorobenzene                | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 1,3-Dichlorobenzene                | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 1,4-Dichlorobenzene                | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Dichlorodifluoromethane            | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 1,1-Dichloroethane                 | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 1,1-Dichloroethene                 | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 1,2-Dichloropropane                | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 1,3-Dichloropropane                | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 2,2-Dichloropropane                | ND     | 0.087 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 1,1-Dichloropropene                | ND     | 0.087 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Hexachlorobutadiene                | ND     | 0.087 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 2-Hexanone                         | ND     | 0.43  |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Isopropylbenzene                   | 0.11   | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 4-Isopropyltoluene                 | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 4-Methyl-2-pentanone               | ND     | 0.43  |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Methylene chloride                 | ND     | 0.13  |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| n-Butylbenzene                     | ND     | 0.13  |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| n-Propylbenzene                    | 0.31   | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| sec-Butylbenzene                   | 0.13   | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| Styrene                            | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| tert-Butylbenzene                  | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.043 |      | mg/Kg-dry | 1  | 10/2/2014 5:43:45 PM | R21643       |

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

|                    |                                                   |                                                      |              |
|--------------------|---------------------------------------------------|------------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |              |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |              |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               | Page 5 of 18 |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |              |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |              |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E41

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13 Dup 01

**Project:** GROUP 9

**Collection Date:** 9/26/2014

**Lab ID:** 1409E41-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch  |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |        |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.043  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| Tetrachloroethene (PCE)            | ND     | 0.043  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| trans-1,2-DCE                      | ND     | 0.043  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| trans-1,3-Dichloropropene          | ND     | 0.043  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| 1,2,3-Trichlorobenzene             | ND     | 0.087  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| 1,2,4-Trichlorobenzene             | ND     | 0.043  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| 1,1,1-Trichloroethane              | ND     | 0.043  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| 1,1,2-Trichloroethane              | ND     | 0.043  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| Trichloroethene (TCE)              | ND     | 0.043  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| Trichlorofluoromethane             | ND     | 0.043  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| 1,2,3-Trichloropropane             | ND     | 0.087  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| Vinyl chloride                     | ND     | 0.043  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| Xylenes, Total                     | 1.5    | 0.087  |      | mg/Kg-dry           | 1  | 10/2/2014 5:43:45 PM | R21643 |
| Surr: Dibromofluoromethane         | 80.0   | 70-130 |      | %REC                | 1  | 10/2/2014 5:43:45 PM | R21643 |
| Surr: 1,2-Dichloroethane-d4        | 85.4   | 70-130 |      | %REC                | 1  | 10/2/2014 5:43:45 PM | R21643 |
| Surr: Toluene-d8                   | 97.4   | 70-130 |      | %REC                | 1  | 10/2/2014 5:43:45 PM | R21643 |
| Surr: 4-Bromofluorobenzene         | 100    | 70-130 |      | %REC                | 1  | 10/2/2014 5:43:45 PM | R21643 |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 18 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E41**

Date Reported: **10/29/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** MEOH BLANK

**Project:** GROUP 9

**Collection Date:**

**Lab ID:** 1409E41-002

**Matrix:** MEOH BLAN

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                | Result | RL     | Qual | Units | DF | Date Analyzed         | Batch               |
|-----------------------------------------|--------|--------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: GASOLINE RANGE</b> |        |        |      |       |    |                       | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)           | ND     | 5.0    |      | mg/Kg | 1  | 9/30/2014 12:40:21 AM | R21528              |
| Surr: BFB                               | 82.9   | 80-120 |      | %REC  | 1  | 9/30/2014 12:40:21 AM | R21528              |
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |        |      |       |    |                       | Analyst: <b>RAA</b> |
| Benzene                                 | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Toluene                                 | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Ethylbenzene                            | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Methyl tert-butyl ether (MTBE)          | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 1,2,4-Trimethylbenzene                  | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 1,3,5-Trimethylbenzene                  | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 1,2-Dichloroethane (EDC)                | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 1,2-Dibromoethane (EDB)                 | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Naphthalene                             | ND     | 0.10   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 1-Methylnaphthalene                     | ND     | 0.20   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 2-Methylnaphthalene                     | ND     | 0.20   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Acetone                                 | ND     | 0.75   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Bromobenzene                            | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Bromodichloromethane                    | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Bromoform                               | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Bromomethane                            | ND     | 0.15   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 2-Butanone                              | ND     | 0.50   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Carbon disulfide                        | ND     | 0.50   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Carbon tetrachloride                    | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Chlorobenzene                           | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Chloroethane                            | ND     | 0.10   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Chloroform                              | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Chloromethane                           | ND     | 0.15   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 2-Chlorotoluene                         | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 4-Chlorotoluene                         | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| cis-1,2-DCE                             | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| cis-1,3-Dichloropropene                 | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 1,2-Dibromo-3-chloropropane             | ND     | 0.10   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Dibromochloromethane                    | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Dibromomethane                          | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 1,2-Dichlorobenzene                     | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 1,3-Dichlorobenzene                     | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 1,4-Dichlorobenzene                     | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| Dichlorodifluoromethane                 | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 1,1-Dichloroethane                      | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |
| 1,1-Dichloroethene                      | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM  | R21643              |

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

|                    |                                                   |                                                      |              |
|--------------------|---------------------------------------------------|------------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    | Page 7 of 18 |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |              |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |              |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |              |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |              |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E41

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: MEOH BLANK

Project: GROUP 9

Collection Date:

Lab ID: 1409E41-002

Matrix: MEOH BLAN

Received Date: 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL     | Qual | Units | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|--------|------|-------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |       |    |                      | Analyst: RAA |
| 1,2-Dichloropropane                | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 1,3-Dichloropropane                | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 2,2-Dichloropropane                | ND     | 0.10   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 1,1-Dichloropropene                | ND     | 0.10   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Hexachlorobutadiene                | ND     | 0.10   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 2-Hexanone                         | ND     | 0.50   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Isopropylbenzene                   | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 4-Isopropyltoluene                 | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 4-Methyl-2-pentanone               | ND     | 0.50   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Methylene chloride                 | ND     | 0.15   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| n-Butylbenzene                     | ND     | 0.15   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| n-Propylbenzene                    | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| sec-Butylbenzene                   | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Styrene                            | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| tert-Butylbenzene                  | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Tetrachloroethene (PCE)            | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| trans-1,2-DCE                      | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| trans-1,3-Dichloropropene          | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 1,2,3-Trichlorobenzene             | ND     | 0.10   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 1,2,4-Trichlorobenzene             | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 1,1,1-Trichloroethane              | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 1,1,2-Trichloroethane              | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Trichloroethene (TCE)              | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Trichlorofluoromethane             | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| 1,2,3-Trichloropropane             | ND     | 0.10   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Vinyl chloride                     | ND     | 0.050  |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Xylenes, Total                     | ND     | 0.10   |      | mg/Kg | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Surr: Dibromofluoromethane         | 81.9   | 70-130 |      | %REC  | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Surr: 1,2-Dichloroethane-d4        | 81.3   | 70-130 |      | %REC  | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Surr: Toluene-d8                   | 87.6   | 70-130 |      | %REC  | 1  | 10/2/2014 4:47:43 PM | R21643       |
| Surr: 4-Bromofluorobenzene         | 81.8   | 70-130 |      | %REC  | 1  | 10/2/2014 4:47:43 PM | R21643       |

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

|                    |                                                   |                                                      |              |
|--------------------|---------------------------------------------------|------------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |              |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |              |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               | Page 8 of 18 |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |              |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |              |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |              |



# Anatek Labs, Inc.

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

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

**Batch #:** 140930034  
**Project Name:** 1409E41

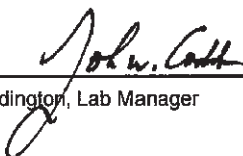
## Analytical Results Report

|                         |                               |                        |           |                           |                    |
|-------------------------|-------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930034-001                 | <b>Sampling Date</b>   | 9/26/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E41-001C / SWMU 13 DUP 01 |                        |           | <b>Sampling Time</b>      |                    |
| <b>Matrix</b>           | Soil                          | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                               |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.259 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 9      | Percent |       | 10/1/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

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

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

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

**Batch #:** 140930034  
**Project Name:** 1409E41

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|-----------|---------------|
| Cyanide   | 0.527      | mg/kg | 0.5       | 105.4 | 90-110  | 10/7/2014 | 10/7/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|------|---------|-----------|---------------|
| 140930030-004 | Cyanide   | ND            | 12.1      | mg/kg | 12.7     | 95.3 | 90-110  | 10/7/2014 | 10/7/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 11.9       | mg/kg | 12.7      | 93.7 | 1.7  | 0-25    | 10/7/2014 | 10/7/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/7/2014 | 10/7/2014     |

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

### Comments:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E41

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |                |           |             |           |                                         |           |        |          |      |
|--------------------------------|-----------|----------------|-----------|-------------|-----------|-----------------------------------------|-----------|--------|----------|------|
| Sample ID                      | MB-15573  | SampType:      | MBLK      |             | TestCode: | EPA Method 8015D: Diesel Range Organics |           |        |          |      |
| Client ID:                     | PBS       | Batch ID:      | 15573     |             | RunNo:    | 21539                                   |           |        |          |      |
| Prep Date:                     | 9/29/2014 | Analysis Date: | 9/30/2014 |             | SeqNo:    | 630649                                  |           | Units: | mg/Kg    |      |
| Analyte                        | Result    | PQL            | SPK value | SPK Ref Val | %REC      | LowLimit                                | HighLimit | %RPD   | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10             |           |             |           |                                         |           |        |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50             |           |             |           |                                         |           |        |          |      |
| Surr: DNOP                     | 11        |                | 10.00     |             | 106       | 57.9                                    | 140       |        |          |      |

|                             |           |     |                          |             |                                                   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15573 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 15573          |             | RunNo: 21539                                      |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |     | Analysis Date: 9/30/2014 |             | SeqNo: 630650                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 47        | 10  | 50.00                    | 0           | 94.9                                              | 68.6     | 130          |      |          |      |
| Surr: DNOP                  | 4.8       |     | 5.000                    |             | 96.0                                              | 57.9     | 140          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E41

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                               |                                 |     |           |                                                   |      |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Sample ID <b>B27</b>          | SampType: <b>MBLK</b>           |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
| Client ID: <b>PBS</b>         | Batch ID: <b>R21528</b>         |     |           | RunNo: <b>21528</b>                               |      |                     |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/29/2014</b> |     |           | SeqNo: <b>630004</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |                                                   |      |                     |           |      |          |      |
| Surr: BFB                     | 880                             |     | 1000      |                                                   | 87.8 | 80                  | 120       |      |          |      |

|                                   |                                 |     |           |                                                   |      |                     |           |      |          |      |
|-----------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Sample ID <b>2.5UG GRO LCS-II</b> | SampType: <b>LCS</b>            |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
| Client ID: <b>LCSS</b>            | Batch ID: <b>R21528</b>         |     |           | RunNo: <b>21528</b>                               |      |                     |           |      |          |      |
| Prep Date:                        | Analysis Date: <b>9/29/2014</b> |     |           | SeqNo: <b>630005</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                           | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)     | 23                              | 5.0 | 25.00     | 0                                                 | 92.0 | 65.8                | 139       |      |          |      |
| Surr: BFB                         | 980                             |     | 1000      |                                                   | 98.1 | 80                  | 120       |      |          |      |

### Qualifiers:

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S Spike Recovery outside accepted recovery limits

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E41

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |        |                          |           |             |                                       |          |              |      |          |      |
|--------------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | 5ml rb | SampType: MBLK           |           |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                     | PBS    | Batch ID: R21643         |           |             | RunNo: 21643                          |          |              |      |          |      |
| Prep Date:                     |        | Analysis Date: 10/2/2014 |           |             | SeqNo: 635213                         |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Toluene                        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Ethylbenzene                   | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Naphthalene                    | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| 1-Methylnaphthalene            | ND     | 0.20                     |           |             |                                       |          |              |      |          |      |
| 2-Methylnaphthalene            | ND     | 0.20                     |           |             |                                       |          |              |      |          |      |
| Acetone                        | ND     | 0.75                     |           |             |                                       |          |              |      |          |      |
| Bromobenzene                   | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromodichloromethane           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromoform                      | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromomethane                   | ND     | 0.15                     |           |             |                                       |          |              |      |          |      |
| 2-Butanone                     | ND     | 0.50                     |           |             |                                       |          |              |      |          |      |
| Carbon disulfide               | ND     | 0.50                     |           |             |                                       |          |              |      |          |      |
| Carbon tetrachloride           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chlorobenzene                  | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chloroethane                   | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| Chloroform                     | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chloromethane                  | ND     | 0.15                     |           |             |                                       |          |              |      |          |      |
| 2-Chlorotoluene                | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 4-Chlorotoluene                | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| cis-1,2-DCE                    | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| Dibromochloromethane           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Dibromomethane                 | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Dichlorodifluoromethane        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethane             | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethene             | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dichloropropane            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,3-Dichloropropane            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 2,2-Dichloropropane            | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E41

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |                |           |             |                             |          |           |      |          |      |
|-----------------------------|--------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                   | 5ml rb | SampType:      | MBLK      | TestCode:   | EPA Method 8260B: Volatiles |          |           |      |          |      |
| Client ID:                  | PBS    | Batch ID:      | R21643    | RunNo:      | 21643                       |          |           |      |          |      |
| Prep Date:                  |        | Analysis Date: | 10/2/2014 | SeqNo:      | 635213                      | Units:   | mg/Kg     |      |          |      |
| Analyte                     | Result | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1-Dichloropropene         | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Hexachlorobutadiene         | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| 2-Hexanone                  | ND     | 0.50           |           |             |                             |          |           |      |          |      |
| Isopropylbenzene            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 4-Isopropyltoluene          | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 4-Methyl-2-pentanone        | ND     | 0.50           |           |             |                             |          |           |      |          |      |
| Methylene chloride          | ND     | 0.15           |           |             |                             |          |           |      |          |      |
| n-Butylbenzene              | ND     | 0.15           |           |             |                             |          |           |      |          |      |
| n-Propylbenzene             | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| sec-Butylbenzene            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Styrene                     | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| tert-Butylbenzene           | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Tetrachloroethene (PCE)     | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| trans-1,2-DCE               | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| trans-1,3-Dichloropropene   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichlorobenzene      | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| 1,2,4-Trichlorobenzene      | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,1-Trichloroethane       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,2-Trichloroethane       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Trichloroethene (TCE)       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Trichlorofluoromethane      | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichloropropane      | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Vinyl chloride              | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Xylenes, Total              | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Surr: Dibromofluoromethane  | 0.42   |                | 0.5000    |             | 83.1                        | 70       | 130       |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.42   |                | 0.5000    |             | 84.6                        | 70       | 130       |      |          |      |
| Surr: Toluene-d8            | 0.43   |                | 0.5000    |             | 86.6                        | 70       | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.50   |                | 0.5000    |             | 99.0                        | 70       | 130       |      |          |      |

|               |           |                |           |             |                             |          |           |      |          |      |
|---------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID     | 100ng lcs | SampType:      | LCS       | TestCode:   | EPA Method 8260B: Volatiles |          |           |      |          |      |
| Client ID:    | LCSS      | Batch ID:      | R21643    | RunNo:      | 21643                       |          |           |      |          |      |
| Prep Date:    |           | Analysis Date: | 10/2/2014 | SeqNo:      | 635214                      | Units:   | mg/Kg     |      |          |      |
| Analyte       | Result    | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene       | 1.0       | 0.050          | 1.000     | 0           | 103                         | 70       | 130       |      |          |      |
| Toluene       | 1.0       | 0.050          | 1.000     | 0           | 102                         | 70       | 130       |      |          |      |
| Chlorobenzene | 1.0       | 0.050          | 1.000     | 0           | 104                         | 70       | 130       |      |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E41

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |                |           |             |                             |          |           |      |          |      |
|-----------------------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                   | 100ng lcs | SampType:      | LCS       | TestCode:   | EPA Method 8260B: Volatiles |          |           |      |          |      |
| Client ID:                  | LCSS      | Batch ID:      | R21643    | RunNo:      | 21643                       |          |           |      |          |      |
| Prep Date:                  |           | Analysis Date: | 10/2/2014 | SeqNo:      | 635214                      | Units:   | mg/Kg     |      |          |      |
| Analyte                     | Result    | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 1.1       | 0.050          | 1.000     | 0           | 106                         | 60.5     | 160       |      |          |      |
| Trichloroethene (TCE)       | 0.89      | 0.050          | 1.000     | 0           | 89.0                        | 58.8     | 139       |      |          |      |
| Surr: Dibromofluoromethane  | 0.43      |                | 0.5000    |             | 85.6                        | 70       | 130       |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.42      |                | 0.5000    |             | 83.4                        | 70       | 130       |      |          |      |
| Surr: Toluene-d8            | 0.44      |                | 0.5000    |             | 87.5                        | 70       | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.52      |                | 0.5000    |             | 104                         | 70       | 130       |      |          |      |

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S Spike Recovery outside accepted recovery limits

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E41

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15576  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15576          |             | RunNo: 21591                              |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |      | Analysis Date: 10/1/2014 |             | SeqNo: 632834                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |                                           |          |              |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E41

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | mb-15576  |      | SampType: MBLK           |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | PBS       |      | Batch ID: 15576          |             |      | RunNo: 21591                              |           |              |          |      |
| Prep Date:                 | 9/29/2014 |      | Analysis Date: 10/1/2014 |             |      | SeqNo: 632834                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| Fluoranthene               | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Fluorene                   | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Hexachlorobenzene          | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Hexachlorobutadiene        | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Hexachloroethane           | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Isophorone                 | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 1-Methylnaphthalene        | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 2-Methylnaphthalene        | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 2-Methylphenol             | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 3+4-Methylphenol           | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Naphthalene                | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 2-Nitroaniline             | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 3-Nitroaniline             | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 4-Nitroaniline             | ND        | 0.40 |                          |             |      |                                           |           |              |          |      |
| Nitrobenzene               | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 2-Nitrophenol              | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 4-Nitrophenol              | ND        | 0.25 |                          |             |      |                                           |           |              |          |      |
| Pentachlorophenol          | ND        | 0.40 |                          |             |      |                                           |           |              |          |      |
| Phenanthrene               | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Phenol                     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Pyrene                     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Pyridine                   | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Surr: 2-Fluorophenol       | 2.3       |      | 3.330                    |             | 68.5 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.3       |      | 3.330                    |             | 69.7 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 1.8       |      | 3.330                    |             | 55.4 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |      | 1.670                    |             | 75.1 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.2       |      | 1.670                    |             | 70.9 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |      | 1.670                    |             | 76.0 | 39.4                                      | 107       |              |          |      |

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P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E41

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | lcs-15576 |      | SampType: LCS            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15576          |             |      | RunNo: 21591                              |           |              |          |      |
| Prep Date:                 | 9/29/2014 |      | Analysis Date: 10/1/2014 |             |      | SeqNo: 632836                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Acenaphthene               | 1.3       | 0.20 | 1.670                    | 0           | 76.1 | 50.7                                      | 110       |              |          |      |
| 4-Chloro-3-methylphenol    | 3.0       | 0.50 | 3.330                    | 0           | 91.1 | 47.8                                      | 107       |              |          |      |
| 2-Chlorophenol             | 2.6       | 0.20 | 3.330                    | 0           | 79.2 | 45.7                                      | 108       |              |          |      |
| 1,4-Dichlorobenzene        | 1.1       | 0.20 | 1.670                    | 0           | 65.7 | 46.1                                      | 112       |              |          |      |
| 2,4-Dinitrotoluene         | 1.2       | 0.50 | 1.670                    | 0           | 73.5 | 44.9                                      | 114       |              |          |      |
| N-Nitrosodi-n-propylamine  | 1.0       | 0.20 | 1.670                    | 0           | 61.7 | 38.7                                      | 128       |              |          |      |
| 4-Nitrophenol              | 2.6       | 0.25 | 3.330                    | 0           | 78.3 | 40.2                                      | 103       |              |          |      |
| Pentachlorophenol          | 1.3       | 0.40 | 3.330                    | 0           | 39.8 | 32.9                                      | 94        |              |          |      |
| Phenol                     | 2.7       | 0.20 | 3.330                    | 0           | 81.0 | 44.1                                      | 109       |              |          |      |
| Pyrene                     | 1.3       | 0.20 | 1.670                    | 0           | 80.6 | 51.9                                      | 109       |              |          |      |
| 1,2,4-Trichlorobenzene     | 1.2       | 0.20 | 1.670                    | 0           | 74.2 | 49.5                                      | 115       |              |          |      |
| Surr: 2-Fluorophenol       | 2.3       |      | 3.330                    |             | 68.4 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.5       |      | 3.330                    |             | 74.0 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.4       |      | 3.330                    |             | 72.5 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.4       |      | 1.670                    |             | 82.1 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 78.1 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.5       |      | 1.670                    |             | 87.4 | 39.4                                      | 107       |              |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E41

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |       |                |             |      |           |                          |      |              |      |  |
|------------|-----------|-------|----------------|-------------|------|-----------|--------------------------|------|--------------|------|--|
| Sample ID  | MB-15734  |       | SampType:      | MBLK        |      | TestCode: | EPA Method 7471: Mercury |      |              |      |  |
| Client ID: | PBS       |       | Batch ID:      | 15734       |      | RunNo:    | 21721                    |      |              |      |  |
| Prep Date: | 10/6/2014 |       | Analysis Date: | 10/7/2014   |      | SeqNo:    | 637705                   |      | Units: mg/Kg |      |  |
| Analyte    | Result    | PQL   | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                | %RPD | RPDLimit     | Qual |  |
| Mercury    | ND        | 0.033 |                |             |      |           |                          |      |              |      |  |

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | LCS-15734 |       | SampType: LCS            |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | LCSS      |       | Batch ID: 15734          |             | RunNo: 21721                       |          |              |      |          |      |
| Prep Date: | 10/6/2014 |       | Analysis Date: 10/7/2014 |             | SeqNo: 637706                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercury    | 0.17      | 0.033 | 0.1667                   | 0           | 105                                | 80       | 120          |      |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E41

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>MB-15704</b>  |      | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>PBS</b>       |      | Batch ID:      | <b>15704</b>     |      | RunNo:    | <b>21664</b>                         |      |                     |      |
| Prep Date: | <b>10/3/2014</b> |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635633</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Arsenic    | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Barium     | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Beryllium  | ND               | 0.15 |                |                  |      |           |                                      |      |                     |      |
| Cadmium    | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Chromium   | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Cobalt     | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Lead       | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Nickel     | ND               | 0.50 |                |                  |      |           |                                      |      |                     |      |
| Selenium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Silver     | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Vanadium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Zinc       | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>LCS-15704</b> |      | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>LCSS</b>      |      | Batch ID:      | <b>15704</b>     |      | RunNo:    | <b>21664</b>                         |      |                     |      |
| Prep Date: | <b>10/3/2014</b> |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635634</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | 24               | 2.5  | 25.00          | 0                | 97.6 | 80        | 120                                  |      |                     |      |
| Arsenic    | 25               | 2.5  | 25.00          | 0                | 100  | 80        | 120                                  |      |                     |      |
| Barium     | 24               | 0.10 | 25.00          | 0                | 96.7 | 80        | 120                                  |      |                     |      |
| Beryllium  | 26               | 0.15 | 25.00          | 0                | 103  | 80        | 120                                  |      |                     |      |
| Cadmium    | 24               | 0.10 | 25.00          | 0                | 96.8 | 80        | 120                                  |      |                     |      |
| Chromium   | 24               | 0.30 | 25.00          | 0                | 96.5 | 80        | 120                                  |      |                     |      |
| Cobalt     | 23               | 0.30 | 25.00          | 0                | 93.9 | 80        | 120                                  |      |                     |      |
| Lead       | 24               | 0.25 | 25.00          | 0                | 94.3 | 80        | 120                                  |      |                     |      |
| Nickel     | 23               | 0.50 | 25.00          | 0                | 93.6 | 80        | 120                                  |      |                     |      |
| Selenium   | 24               | 2.5  | 25.00          | 0                | 94.1 | 80        | 120                                  |      |                     |      |
| Silver     | 5.0              | 0.25 | 5.000          | 0                | 99.8 | 80        | 120                                  |      |                     |      |
| Vanadium   | 25               | 2.5  | 25.00          | 0                | 102  | 80        | 120                                  |      |                     |      |
| Zinc       | 24               | 2.5  | 25.00          | 0                | 95.7 | 80        | 120                                  |      |                     |      |

### Qualifiers:

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- H Holding times for preparation or analysis exceeded
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## Sample Log-In Check List

Client Name: **Western Refining Southw**

Work Order Number: **1409E41**

RcptNo: 1

Received by/date:

Logged By:

**Ashley Gallegos**

**9/27/2014 5:45:00 AM**

Completed By:

**Ashley Gallegos**

**9/27/2014 2:45:11 PM**

Reviewed By:

**OS**

**09/29/14**

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.1                     | Good      | Yes         |         |           |           |





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

October 22, 2014

Kelly Robinson

Western Refining Southwest, Inc.  
#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409E42

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/27/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



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

## Case Narrative

WO#: 1409E42  
Date: 10/22/2014

---

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

---

Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E42**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:00:00 PM

**Lab ID:** 1409E42-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 150    | 11       |      | mg/Kg-dry | 1  | 10/1/2014 1:20:46 PM  | 15573                |
| Motor Oil Range Organics (MRO)                 | 290    | 53       |      | mg/Kg-dry | 1  | 10/1/2014 1:20:46 PM  | 15573                |
| Surr: DNOP                                     | 113    | 57.9-140 |      | %REC      | 1  | 10/1/2014 1:20:46 PM  | 15573                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 12     | 4.0      |      | mg/Kg-dry | 1  | 9/30/2014 1:10:24 AM  | R21528               |
| Surr: BFB                                      | 125    | 80-120   | S    | %REC      | 1  | 9/30/2014 1:10:24 AM  | R21528               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 7.7    | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.066  | 0.034    |      | mg/Kg-dry | 1  | 10/7/2014 1:23:35 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Arsenic                                        | 5.7    | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Barium                                         | 170    | 0.11     |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Beryllium                                      | 0.41   | 0.16     |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Cadmium                                        | 0.17   | 0.11     |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Chromium                                       | 8.4    | 0.32     |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Cobalt                                         | 4.4    | 0.32     |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Lead                                           | 8.6    | 0.26     |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Nickel                                         | 10     | 0.53     |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Vanadium                                       | 31     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| Zinc                                           | 64     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 12:55:32 PM | 15684                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |
| Acenaphthylene                                 | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |
| Aniline                                        | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |
| Anthracene                                     | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |
| Azobenzene                                     | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |
| Benz(a)anthracene                              | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |
| Benzyl alcohol                                 | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:00:00 PM

**Lab ID:** 1409E42-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Carbazole                              | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.54 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Chrysene                               | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.87 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Dibenzofuran                           | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.54 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.87 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.65 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Fluoranthene                           | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Fluorene                               | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Hexachloroethane                       | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576        |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 3 of 34 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-16 (0-0.5')

Project: GROUP 9

Collection Date: 9/24/2014 4:00:00 PM

Lab ID: 1409E42-001

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|-----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                       | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 1.1       |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| 3+4-Methylphenol                       | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| N-Nitrosodi-n-propylamine              | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| N-Nitrosodiphenylamine                 | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Naphthalene                            | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| 2-Nitroaniline                         | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| 3-Nitroaniline                         | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| 4-Nitroaniline                         | ND      | 0.87      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Nitrobenzene                           | ND      | 1.1       |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| 2-Nitrophenol                          | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| 4-Nitrophenol                          | ND      | 0.54      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Pentachlorophenol                      | ND      | 0.87      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Phenanthrene                           | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Phenol                                 | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Pyrene                                 | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Pyridine                               | ND      | 1.1       |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| 2,4,5-Trichlorophenol                  | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| 2,4,6-Trichlorophenol                  | ND      | 0.43      |      | mg/Kg-dry | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Surr: 2-Fluorophenol                   | 87.5    | 21-111    |      | %REC      | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Surr: Phenol-d5                        | 84.5    | 23.1-117  |      | %REC      | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Surr: 2,4,6-Tribromophenol             | 82.3    | 22.7-88.9 |      | %REC      | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Surr: Nitrobenzene-d5                  | 91.8    | 24.5-126  |      | %REC      | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Surr: 2-Fluorobiphenyl                 | 83.6    | 21.2-129  |      | %REC      | 1  | 10/1/2014 10:28:51 PM | 15576         |
| Surr: 4-Terphenyl-d14                  | 87.9    | 39.4-107  |      | %REC      | 1  | 10/1/2014 10:28:51 PM | 15576         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                       | Analyst: cadg |
| Benzene                                | 0.00845 | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| Toluene                                | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| Ethylbenzene                           | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| Xylenes, Total                         | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| 1,2,4-Trimethylbenzene                 | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| Naphthalene                            | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| 1-Methylnaphthalene                    | ND      | 0.00390   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| 2-Methylnaphthalene                    | ND      | 0.00390   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |
| Acetone                                | 0.0340  | 0.00975   |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM  | 15569         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-16 (0-0.5')

Project: GROUP 9

Collection Date: 9/24/2014 4:00:00 PM

Lab ID: 1409E42-001

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Bromodichloromethane                   | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Bromoform                              | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Bromomethane                           | ND     | 0.00293 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 2-Butanone                             | ND     | 0.00975 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Carbon tetrachloride                   | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Chlorobenzene                          | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Chloroethane                           | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Chloroform                             | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Chloromethane                          | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 2-Chlorotoluene                        | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Carbon disulfide                       | ND     | 0.00975 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 4-Chlorotoluene                        | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| cis-1,2-DCE                            | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| cis-1,3-Dichloropropene                | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Dibromochloromethane                   | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Dibromomethane                         | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 1,2-Dichlorobenzene                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 1,3-Dichlorobenzene                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 1,4-Dichlorobenzene                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Dichlorodifluoromethane                | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 1,1-Dichloroethane                     | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 1,1-Dichloroethene                     | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 1,2-Dichloropropane                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 1,3-Dichloropropane                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 2,2-Dichloropropane                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 1,1-Dichloropropene                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Hexachlorobutadiene                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Isopropylbenzene                       | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 4-Isopropyltoluene                     | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Methylene chloride                     | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| n-Butylbenzene                         | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 2-Hexanone                             | ND     | 0.00975 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| n-Propylbenzene                        | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| sec-Butylbenzene                       | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| Styrene                                | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| 4-Methyl-2-pentanone                   | ND     | 0.00975 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |
| tert-Butylbenzene                      | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569         |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 5 of 34 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E42**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:00:00 PM

**Lab ID:** 1409E42-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| Tetrachloroethene (PCE)                | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| trans-1,2-DCE                          | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| trans-1,3-Dichloropropene              | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| 1,1,1-Trichloroethane                  | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| 1,1,2-Trichloroethane                  | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| Trichloroethene (TCE)                  | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| Trichlorofluoromethane                 | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| 1,2,3-Trichloropropane                 | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| Vinyl chloride                         | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 3:06:16 PM | 15569                |
| Surr: 1,2-Dichloroethane-d4            | 102    | 70-130   |      | %REC      | 1  | 9/29/2014 3:06:16 PM | 15569                |
| Surr: 4-Bromofluorobenzene             | 103    | 65.3-135 |      | %REC      | 1  | 9/29/2014 3:06:16 PM | 15569                |
| Surr: Dibromofluoromethane             | 101    | 70-130   |      | %REC      | 1  | 9/29/2014 3:06:16 PM | 15569                |
| Surr: Toluene-d8                       | 99.7   | 70-130   |      | %REC      | 1  | 9/29/2014 3:06:16 PM | 15569                |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 34 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E42**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:10:00 PM

**Lab ID:** 1409E42-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 400    | 110      |      | mg/Kg-dry | 10 | 9/30/2014 9:59:24 PM  | 15573                |
| Motor Oil Range Organics (MRO)                 | 750    | 550      |      | mg/Kg-dry | 10 | 9/30/2014 9:59:24 PM  | 15573                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/30/2014 9:59:24 PM  | 15573                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 6.9    | 3.8      |      | mg/Kg-dry | 1  | 9/30/2014 1:40:26 AM  | R21528               |
| Surr: BFB                                      | 113    | 80-120   |      | %REC      | 1  | 9/30/2014 1:40:26 AM  | R21528               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 9.9    | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 10/7/2014 1:25:24 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Arsenic                                        | 4.2    | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Barium                                         | 180    | 0.11     |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Beryllium                                      | 0.59   | 0.17     |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Chromium                                       | 8.1    | 0.33     |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Cobalt                                         | 4.8    | 0.33     |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Lead                                           | 5.3    | 0.28     |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Nickel                                         | 8.4    | 0.55     |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Vanadium                                       | 29     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| Zinc                                           | 42     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 12:56:47 PM | 15684                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |
| Acenaphthylene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |
| Aniline                                        | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |
| Anthracene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |
| Azobenzene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |
| Benz(a)anthracene                              | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |
| Benzo(a)pyrene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |
| Benzo(b)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |
| Benzo(k)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |
| Benzoic acid                                   | ND     | 5.5      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |
| Benzyl alcohol                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:10:00 PM

**Lab ID:** 1409E42-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.5 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Carbazole                              | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 5.5 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 4-Chloroaniline                        | ND     | 5.5 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 2.8 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 2-Chlorophenol                         | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Chrysene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 5.5 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 4.4 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Dibenzofuran                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.8 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Diethyl phthalate                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Dimethyl phthalate                     | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 4.4 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 3.3 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.5 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 5.5 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 5.5 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 5.5 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Fluoranthene                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Fluorene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Hexachlorobenzene                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Hexachloroethane                       | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| Isophorone                             | ND     | 5.5 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576        |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 8 of 34 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:10:00 PM

**Lab ID:** 1409E42-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|-----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                       | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 5.5       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| 3+4-Methylphenol                       | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| N-Nitrosodi-n-propylamine              | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| N-Nitrosodiphenylamine                 | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Naphthalene                            | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| 2-Nitroaniline                         | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| 3-Nitroaniline                         | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| 4-Nitroaniline                         | ND      | 4.4       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Nitrobenzene                           | ND      | 5.5       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| 2-Nitrophenol                          | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| 4-Nitrophenol                          | ND      | 2.8       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Pentachlorophenol                      | ND      | 4.4       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Phenanthrene                           | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Phenol                                 | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Pyrene                                 | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Pyridine                               | ND      | 5.5       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| 1,2,4-Trichlorobenzene                 | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| 2,4,5-Trichlorophenol                  | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| 2,4,6-Trichlorophenol                  | ND      | 2.2       |      | mg/Kg-dry | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Surr: 2-Fluorophenol                   | 0       | 21-111    | S    | %REC      | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Surr: Phenol-d5                        | 0       | 23.1-117  | S    | %REC      | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Surr: 2,4,6-Tribromophenol             | 0       | 22.7-88.9 | S    | %REC      | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Surr: Nitrobenzene-d5                  | 0       | 24.5-126  | S    | %REC      | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Surr: 2-Fluorobiphenyl                 | 0       | 21.2-129  | S    | %REC      | 1  | 10/1/2014 10:56:43 PM | 15576         |
| Surr: 4-Terphenyl-d14                  | 0       | 39.4-107  | S    | %REC      | 1  | 10/1/2014 10:56:43 PM | 15576         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                       | Analyst: cadg |
| Benzene                                | 0.0143  | 0.00171   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| Toluene                                | ND      | 0.00171   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| Ethylbenzene                           | 0.00476 | 0.00171   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| Xylenes, Total                         | ND      | 0.00171   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00171   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| 1,2,4-Trimethylbenzene                 | ND      | 0.00171   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00171   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00171   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00171   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| Naphthalene                            | ND      | 0.00171   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| 1-Methylnaphthalene                    | ND      | 0.00343   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| 2-Methylnaphthalene                    | ND      | 0.00343   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |
| Acetone                                | 0.112   | 0.00857   |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM  | 15569         |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-16 (0.5-2')

Project: GROUP 9

Collection Date: 9/24/2014 4:10:00 PM

Lab ID: 1409E42-002

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Bromodichloromethane                   | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Bromoform                              | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Bromomethane                           | ND     | 0.00257 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 2-Butanone                             | 0.0350 | 0.00857 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Carbon tetrachloride                   | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Chlorobenzene                          | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Chloroethane                           | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Chloroform                             | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Chloromethane                          | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 2-Chlorotoluene                        | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Carbon disulfide                       | ND     | 0.00857 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 4-Chlorotoluene                        | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| cis-1,2-DCE                            | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| cis-1,3-Dichloropropene                | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Dibromochloromethane                   | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Dibromomethane                         | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 1,2-Dichlorobenzene                    | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 1,3-Dichlorobenzene                    | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 1,4-Dichlorobenzene                    | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Dichlorodifluoromethane                | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 1,1-Dichloroethane                     | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 1,1-Dichloroethene                     | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 1,2-Dichloropropane                    | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 1,3-Dichloropropane                    | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 2,2-Dichloropropane                    | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 1,1-Dichloropropene                    | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Hexachlorobutadiene                    | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Isopropylbenzene                       | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 4-Isopropyltoluene                     | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Methylene chloride                     | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| n-Butylbenzene                         | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 2-Hexanone                             | ND     | 0.00857 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| n-Propylbenzene                        | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| sec-Butylbenzene                       | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| Styrene                                | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| 4-Methyl-2-pentanone                   | ND     | 0.00857 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |
| tert-Butylbenzene                      | ND     | 0.00171 |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E42**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:10:00 PM

**Lab ID:** 1409E42-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| Tetrachloroethene (PCE)                | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| trans-1,2-DCE                          | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| trans-1,3-Dichloropropene              | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| 1,1,1-Trichloroethane                  | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| 1,1,2-Trichloroethane                  | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| Trichloroethene (TCE)                  | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| Trichlorofluoromethane                 | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| 1,2,3-Trichloropropane                 | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| Vinyl chloride                         | ND     | 0.00171  |      | mg/Kg-dry | 1  | 9/29/2014 3:35:04 PM | 15569                |
| Surr: 1,2-Dichloroethane-d4            | 105    | 70-130   |      | %REC      | 1  | 9/29/2014 3:35:04 PM | 15569                |
| Surr: 4-Bromofluorobenzene             | 109    | 65.3-135 |      | %REC      | 1  | 9/29/2014 3:35:04 PM | 15569                |
| Surr: Dibromofluoromethane             | 104    | 70-130   |      | %REC      | 1  | 9/29/2014 3:35:04 PM | 15569                |
| Surr: Toluene-d8                       | 96.9   | 70-130   |      | %REC      | 1  | 9/29/2014 3:35:04 PM | 15569                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:20:00 PM

**Lab ID:** 1409E42-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 9/30/2014 10:29:27 PM | 15573                |
| Motor Oil Range Organics (MRO)                 | ND     | 56       |      | mg/Kg-dry | 1  | 9/30/2014 10:29:27 PM | 15573                |
| Surr: DNOP                                     | 108    | 57.9-140 |      | %REC      | 1  | 9/30/2014 10:29:27 PM | 15573                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 5.6      |      | mg/Kg-dry | 1  | 10/1/2014 12:00:38 AM | 15572                |
| Surr: BFB                                      | 89.7   | 80-120   |      | %REC      | 1  | 10/1/2014 12:00:38 AM | 15572                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 11     | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.035    |      | mg/Kg-dry | 1  | 10/7/2014 1:27:13 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Arsenic                                        | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Barium                                         | 270    | 0.11     |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Beryllium                                      | 0.30   | 0.16     |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Chromium                                       | 3.8    | 0.33     |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Cobalt                                         | 4.0    | 0.33     |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Lead                                           | 2.5    | 0.27     |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Nickel                                         | 4.1    | 0.55     |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Vanadium                                       | 20     | 2.7      |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| Zinc                                           | 18     | 2.7      |      | mg/Kg-dry | 1  | 10/3/2014 12:58:02 PM | 15684                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |
| Benzoic acid                                   | ND     | 0.56     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM  | 15576                |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:20:00 PM

**Lab ID:** 1409E42-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 4-Chloroaniline                        | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.28 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.28 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.33 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Isophorone                             | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-16 (18-20')

Project: GROUP 9

Collection Date: 9/24/2014 4:20:00 PM

Lab ID: 1409E42-003

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.56      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 3+4-Methylphenol                       | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| N-Nitrosodi-n-propylamine              | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| N-Nitrosodiphenylamine                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Naphthalene                            | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 3-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 4-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Nitrobenzene                           | ND     | 0.56      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2-Nitrophenol                          | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 4-Nitrophenol                          | ND     | 0.28      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Pentachlorophenol                      | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Phenanthrene                           | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Phenol                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Pyrene                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Pyridine                               | ND     | 0.56      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2,4,5-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| 2,4,6-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Surr: 2-Fluorophenol                   | 84.4   | 21-111    |      | %REC      | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Surr: Phenol-d5                        | 80.7   | 23.1-117  |      | %REC      | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Surr: 2,4,6-Tribromophenol             | 76.5   | 22.7-88.9 |      | %REC      | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Surr: Nitrobenzene-d5                  | 86.2   | 24.5-126  |      | %REC      | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Surr: 2-Fluorobiphenyl                 | 77.3   | 21.2-129  |      | %REC      | 1  | 10/2/2014 4:25:15 PM | 15576        |
| Surr: 4-Terphenyl-d14                  | 78.6   | 39.4-107  |      | %REC      | 1  | 10/2/2014 4:25:15 PM | 15576        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.056     |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Toluene                                | ND     | 0.056     |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Ethylbenzene                           | ND     | 0.056     |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.056     |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.056     |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.056     |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.056     |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.056     |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Naphthalene                            | ND     | 0.11      |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1-Methylnaphthalene                    | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 2-Methylnaphthalene                    | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Acetone                                | ND     | 0.84      |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Bromobenzene                           | ND     | 0.056     |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:20:00 PM

**Lab ID:** 1409E42-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|-------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Bromoform                          | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Bromomethane                       | ND     | 0.17  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 2-Butanone                         | ND     | 0.56  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Carbon disulfide                   | ND     | 0.56  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Carbon tetrachloride               | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Chlorobenzene                      | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Chloroethane                       | ND     | 0.11  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Chloroform                         | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Chloromethane                      | ND     | 0.17  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 2-Chlorotoluene                    | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 4-Chlorotoluene                    | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| cis-1,2-DCE                        | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| cis-1,3-Dichloropropene            | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.11  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Dibromochloromethane               | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Dibromomethane                     | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,2-Dichlorobenzene                | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,3-Dichlorobenzene                | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,4-Dichlorobenzene                | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Dichlorodifluoromethane            | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,1-Dichloroethane                 | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,1-Dichloroethene                 | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,2-Dichloropropane                | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,3-Dichloropropane                | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 2,2-Dichloropropane                | ND     | 0.11  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,1-Dichloropropene                | ND     | 0.11  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Hexachlorobutadiene                | ND     | 0.11  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 2-Hexanone                         | ND     | 0.56  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Isopropylbenzene                   | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 4-Isopropyltoluene                 | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 4-Methyl-2-pentanone               | ND     | 0.56  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Methylene chloride                 | ND     | 0.17  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| n-Butylbenzene                     | ND     | 0.17  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| n-Propylbenzene                    | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| sec-Butylbenzene                   | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Styrene                            | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| tert-Butylbenzene                  | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.056 |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:20:00 PM

**Lab ID:** 1409E42-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|--------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: RAA |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.056  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Tetrachloroethene (PCE)            | ND     | 0.056  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| trans-1,2-DCE                      | ND     | 0.056  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| trans-1,3-Dichloropropene          | ND     | 0.056  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,2,3-Trichlorobenzene             | ND     | 0.11   |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,2,4-Trichlorobenzene             | ND     | 0.056  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,1,1-Trichloroethane              | ND     | 0.056  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,1,2-Trichloroethane              | ND     | 0.056  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Trichloroethene (TCE)              | ND     | 0.056  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Trichlorofluoromethane             | ND     | 0.056  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| 1,2,3-Trichloropropane             | ND     | 0.11   |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Vinyl chloride                     | ND     | 0.056  |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Xylenes, Total                     | ND     | 0.11   |      | mg/Kg-dry | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Surr: Dibromofluoromethane         | 79.2   | 70-130 |      | %REC      | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Surr: 1,2-Dichloroethane-d4        | 78.4   | 70-130 |      | %REC      | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Surr: Toluene-d8                   | 90.8   | 70-130 |      | %REC      | 1  | 10/2/2014 6:11:54 PM | 15572        |
| Surr: 4-Bromofluorobenzene         | 85.3   | 70-130 |      | %REC      | 1  | 10/2/2014 6:11:54 PM | 15572        |

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

**Qualifiers:**

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E42**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:50:00 PM

**Lab ID:** 1409E42-004

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 540    | 10       |      | mg/Kg-dry | 1  | 9/30/2014 10:59:24 PM | 15573                |
| Motor Oil Range Organics (MRO)                 | ND     | 51       |      | mg/Kg-dry | 1  | 9/30/2014 10:59:24 PM | 15573                |
| Surr: DNOP                                     | 122    | 57.9-140 |      | %REC      | 1  | 9/30/2014 10:59:24 PM | 15573                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 19     | 10       |      | mg/Kg-dry | 2  | 10/1/2014 10:04:59 PM | 15572                |
| Surr: BFB                                      | 172    | 80-120   | S    | %REC      | 2  | 10/1/2014 10:04:59 PM | 15572                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 3.4    | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.032    |      | mg/Kg-dry | 1  | 10/7/2014 1:29:03 PM  | 15734                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Arsenic                                        | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Barium                                         | 160    | 0.10     |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Chromium                                       | 4.4    | 0.31     |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Cobalt                                         | 3.3    | 0.31     |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Lead                                           | 5.4    | 0.26     |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Nickel                                         | 3.4    | 0.51     |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Vanadium                                       | 18     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| Zinc                                           | 15     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:03:12 PM  | 15684                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM  | 15576                |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-16 (26-28')

Project: GROUP 9

Collection Date: 9/24/2014 4:50:00 PM

Lab ID: 1409E42-004

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 1-Methylnaphthalene                    | 0.96   | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2-Methylnaphthalene                    | 1.7    | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-16 (26-28')

Project: GROUP 9

Collection Date: 9/24/2014 4:50:00 PM

Lab ID: 1409E42-004

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Naphthalene                            | 0.26   | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 4-Nitroaniline                         | ND     | 0.41      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Pentachlorophenol                      | ND     | 0.41      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Phenanthrene                           | 0.21   | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Surr: 2-Fluorophenol                   | 56.7   | 21-111    |      | %REC      | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Surr: Phenol-d5                        | 60.0   | 23.1-117  |      | %REC      | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Surr: 2,4,6-Tribromophenol             | 73.0   | 22.7-88.9 |      | %REC      | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Surr: Nitrobenzene-d5                  | 68.0   | 24.5-126  |      | %REC      | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Surr: 2-Fluorobiphenyl                 | 67.7   | 21.2-129  |      | %REC      | 1  | 10/2/2014 4:53:27 PM | 15576        |
| Surr: 4-Terphenyl-d14                  | 77.1   | 39.4-107  |      | %REC      | 1  | 10/2/2014 4:53:27 PM | 15576        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.10      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| Toluene                                | ND     | 0.10      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| Ethylbenzene                           | ND     | 0.10      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.10      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| 1,2,4-Trimethylbenzene                 | 0.19   | 0.10      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.10      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.10      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.10      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| Naphthalene                            | 0.45   | 0.20      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| 1-Methylnaphthalene                    | 1.4    | 0.40      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| 2-Methylnaphthalene                    | 2.5    | 0.40      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| Acetone                                | ND     | 1.5       |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |
| Bromobenzene                           | ND     | 0.10      |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572        |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E42

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-16 (26-28')

Project: GROUP 9

Collection Date: 9/24/2014 4:50:00 PM

Lab ID: 1409E42-004

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL   | Qual | Units        | DF | Date Analyzed        | Batch |
|------------------------------------|--------|------|------|--------------|----|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      | Analyst: RAA |    |                      |       |
| Bromodichloromethane               | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Bromoform                          | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Bromomethane                       | ND     | 0.30 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 2-Butanone                         | ND     | 1.0  |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Carbon disulfide                   | ND     | 1.0  |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Carbon tetrachloride               | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Chlorobenzene                      | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Chloroethane                       | ND     | 0.20 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Chloroform                         | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Chloromethane                      | ND     | 0.30 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 2-Chlorotoluene                    | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 4-Chlorotoluene                    | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| cis-1,2-DCE                        | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| cis-1,3-Dichloropropene            | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.20 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Dibromochloromethane               | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Dibromomethane                     | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 1,2-Dichlorobenzene                | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 1,3-Dichlorobenzene                | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 1,4-Dichlorobenzene                | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Dichlorodifluoromethane            | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 1,1-Dichloroethane                 | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 1,1-Dichloroethene                 | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 1,2-Dichloropropane                | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 1,3-Dichloropropane                | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 2,2-Dichloropropane                | ND     | 0.20 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 1,1-Dichloropropene                | ND     | 0.20 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Hexachlorobutadiene                | ND     | 0.20 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 2-Hexanone                         | ND     | 1.0  |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Isopropylbenzene                   | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 4-Isopropyltoluene                 | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 4-Methyl-2-pentanone               | ND     | 1.0  |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Methylene chloride                 | ND     | 0.30 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| n-Butylbenzene                     | ND     | 0.30 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| n-Propylbenzene                    | 0.10   | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| sec-Butylbenzene                   | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| Styrene                            | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| tert-Butylbenzene                  | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.10 |      | mg/Kg-dry    | 2  | 10/2/2014 6:39:44 PM | 15572 |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E42**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-16 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 4:50:00 PM

**Lab ID:** 1409E42-004

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.10   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| Tetrachloroethene (PCE)            | ND     | 0.10   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| trans-1,2-DCE                      | ND     | 0.10   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| trans-1,3-Dichloropropene          | ND     | 0.10   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| 1,2,3-Trichlorobenzene             | ND     | 0.20   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| 1,2,4-Trichlorobenzene             | ND     | 0.10   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| 1,1,1-Trichloroethane              | ND     | 0.10   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| 1,1,2-Trichloroethane              | ND     | 0.10   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| Trichloroethene (TCE)              | ND     | 0.10   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| Trichlorofluoromethane             | ND     | 0.10   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| 1,2,3-Trichloropropane             | ND     | 0.20   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| Vinyl chloride                     | ND     | 0.10   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| Xylenes, Total                     | ND     | 0.20   |      | mg/Kg-dry | 2  | 10/2/2014 6:39:44 PM | 15572               |
| Surr: Dibromofluoromethane         | 79.3   | 70-130 |      | %REC      | 2  | 10/2/2014 6:39:44 PM | 15572               |
| Surr: 1,2-Dichloroethane-d4        | 78.4   | 70-130 |      | %REC      | 2  | 10/2/2014 6:39:44 PM | 15572               |
| Surr: Toluene-d8                   | 87.5   | 70-130 |      | %REC      | 2  | 10/2/2014 6:39:44 PM | 15572               |
| Surr: 4-Bromofluorobenzene         | 105    | 70-130 |      | %REC      | 2  | 10/2/2014 6:39:44 PM | 15572               |

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

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 21 of 34 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Anatek Labs, Inc.

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

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

**Batch #:** 140930028  
**Project Name:** 1409E42

## Analytical Results Report

|                         |                                    |                        |           |                           |                    |
|-------------------------|------------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930028-001                      | <b>Sampling Date</b>   | 9/24/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E42-001C / SWMU 13-16 (0-0.5') |                        |           | <b>Sampling Time</b>      | 4:00 PM            |
| <b>Matrix</b>           | Soil                               | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                    |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.249 | 10/6/2014     | CRW     | EPA 335.4 |           |
| %moisture | 6.8    | Percent |       | 10/1/2014     | KJS     | %moisture |           |

|                         |                                    |                        |           |                           |                    |
|-------------------------|------------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930028-002                      | <b>Sampling Date</b>   | 9/24/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E42-002C / SWMU 13-15 (0.5-2') |                        |           | <b>Sampling Time</b>      | 4:10 PM            |
| <b>Matrix</b>           | Soil                               | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                    |                        |           |                           |                    |

| Parameter | Result | Units   | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.26 | 10/6/2014     | CRW     | EPA 335.4 |           |
| %moisture | 9.5    | Percent |      | 10/1/2014     | KJS     | %moisture |           |

|                         |                                    |                        |           |                           |                    |
|-------------------------|------------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930028-003                      | <b>Sampling Date</b>   | 9/24/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E42-003B / SWMU 13-16 (18-20') |                        |           | <b>Sampling Time</b>      | 4:20 PM            |
| <b>Matrix</b>           | Soil                               | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                    |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.266 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 10.6   | Percent |       | 10/1/2014     | KJS     | %moisture |           |

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

# Anatek Labs, Inc.

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

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

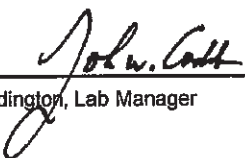
**Batch #:** 140930028  
**Project Name:** 1409E42

## Analytical Results Report

|                         |                                    |                        |           |                           |                    |
|-------------------------|------------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930028-004                      | <b>Sampling Date</b>   | 9/24/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E42-004B / SWMU 13-16 (26-28') |                        |           | <b>Sampling Time</b>      | 4:50 PM            |
| <b>Matrix</b>           | Soil                               | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                    |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.247 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 2.6    | Percent |       | 10/1/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

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

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

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

Wednesday, October 15, 2014

Page 2 of 2

# Anatek Labs, Inc.

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

**Batch #:** 140930028  
**Project Name:** 1409E42

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|-----------|---------------|
| Cyanide   | 0.527      | mg/kg | 0.5       | 105.4 | 90-110  | 10/7/2014 | 10/7/2014     |
| Cyanide   | 0.468      | mg/kg | 0.5       | 93.6  | 90-110  | 10/6/2014 | 10/6/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|-------|---------|-----------|---------------|
| 140930030-004 | Cyanide   | ND            | 12.1      | mg/kg | 12.7     | 95.3  | 90-110  | 10/7/2014 | 10/7/2014     |
| 140930028-001 | Cyanide   | ND            | 12.8      | mg/kg | 12.5     | 102.4 | 90-110  | 10/6/2014 | 10/6/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 11.9       | mg/kg | 12.7      | 93.7 | 1.7  | 0-25    | 10/7/2014 | 10/7/2014     |
| Cyanide   | 12.3       | mg/kg | 12.5      | 98.4 | 4.0  | 0-25    | 10/6/2014 | 10/6/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/7/2014 | 10/7/2014     |
| Cyanide   | ND     | mg/Kg | 0.5 | 10/6/2014 | 10/6/2014     |

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

### Comments:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |                |           |             |           |                                         |           |        |          |      |
|--------------------------------|-----------|----------------|-----------|-------------|-----------|-----------------------------------------|-----------|--------|----------|------|
| Sample ID                      | MB-15573  | SampType:      | MBLK      |             | TestCode: | EPA Method 8015D: Diesel Range Organics |           |        |          |      |
| Client ID:                     | PBS       | Batch ID:      | 15573     |             | RunNo:    | 21539                                   |           |        |          |      |
| Prep Date:                     | 9/29/2014 | Analysis Date: | 9/30/2014 |             | SeqNo:    | 630649                                  |           | Units: | mg/Kg    |      |
| Analyte                        | Result    | PQL            | SPK value | SPK Ref Val | %REC      | LowLimit                                | HighLimit | %RPD   | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10             |           |             |           |                                         |           |        |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50             |           |             |           |                                         |           |        |          |      |
| Surr: DNOP                     | 11        |                | 10.00     |             | 106       | 57.9                                    | 140       |        |          |      |

|                             |           |     |                          |             |                                                   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15573 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 15573          |             | RunNo: 21539                                      |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |     | Analysis Date: 9/30/2014 |             | SeqNo: 630650                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 47        | 10  | 50.00                    | 0           | 94.9                                              | 68.6     | 130          |      |          |      |
| Surr: DNOP                  | 4.8       |     | 5.000                    |             | 96.0                                              | 57.9     | 140          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                               |                                 |     |           |                                                   |      |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Sample ID <b>B27</b>          | SampType: <b>MBLK</b>           |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
| Client ID: <b>PBS</b>         | Batch ID: <b>R21528</b>         |     |           | RunNo: <b>21528</b>                               |      |                     |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/29/2014</b> |     |           | SeqNo: <b>630004</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |                                                   |      |                     |           |      |          |      |
| Surr: BFB                     | 880                             |     | 1000      |                                                   | 87.8 | 80                  | 120       |      |          |      |

|                                   |                                 |     |           |                                                   |      |                     |           |      |          |      |
|-----------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Sample ID <b>2.5UG GRO LCS-II</b> | SampType: <b>LCS</b>            |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
| Client ID: <b>LCSS</b>            | Batch ID: <b>R21528</b>         |     |           | RunNo: <b>21528</b>                               |      |                     |           |      |          |      |
| Prep Date:                        | Analysis Date: <b>9/29/2014</b> |     |           | SeqNo: <b>630005</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                           | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)     | 23                              | 5.0 | 25.00     | 0                                                 | 92.0 | 65.8                | 139       |      |          |      |
| Surr: BFB                         | 980                             |     | 1000      |                                                   | 98.1 | 80                  | 120       |      |          |      |

|                               |                                 |     |           |                                                   |      |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Sample ID <b>MB-15572</b>     | SampType: <b>MBLK</b>           |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
| Client ID: <b>PBS</b>         | Batch ID: <b>15572</b>          |     |           | RunNo: <b>21540</b>                               |      |                     |           |      |          |      |
| Prep Date: <b>9/29/2014</b>   | Analysis Date: <b>9/30/2014</b> |     |           | SeqNo: <b>631089</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |                                                   |      |                     |           |      |          |      |
| Surr: BFB                     | 890                             |     | 1000      |                                                   | 88.9 | 80                  | 120       |      |          |      |

|                               |                                 |     |           |                                                   |      |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Sample ID <b>LCS-15572</b>    | SampType: <b>LCS</b>            |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
| Client ID: <b>LCSS</b>        | Batch ID: <b>15572</b>          |     |           | RunNo: <b>21540</b>                               |      |                     |           |      |          |      |
| Prep Date: <b>9/29/2014</b>   | Analysis Date: <b>9/30/2014</b> |     |           | SeqNo: <b>631090</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 28                              | 5.0 | 25.00     | 0                                                 | 112  | 65.8                | 139       |      |          |      |
| Surr: BFB                     | 970                             |     | 1000      |                                                   | 97.0 | 80                  | 120       |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |                |           |             |                             |          |           |      |          |      |
|--------------------------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                      | mb-15572  | SampType:      | MBLK      | TestCode:   | EPA Method 8260B: Volatiles |          |           |      |          |      |
| Client ID:                     | PBS       | Batch ID:      | 15572     | RunNo:      | 21567                       |          |           |      |          |      |
| Prep Date:                     | 9/29/2014 | Analysis Date: | 10/1/2014 | SeqNo:      | 632097                      | Units:   | mg/Kg     |      |          |      |
| Analyte                        | Result    | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Toluene                        | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Ethylbenzene                   | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Naphthalene                    | ND        | 0.10           |           |             |                             |          |           |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.20           |           |             |                             |          |           |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.20           |           |             |                             |          |           |      |          |      |
| Acetone                        | ND        | 0.75           |           |             |                             |          |           |      |          |      |
| Bromobenzene                   | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Bromodichloromethane           | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Bromoform                      | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Bromomethane                   | ND        | 0.15           |           |             |                             |          |           |      |          |      |
| 2-Butanone                     | ND        | 0.50           |           |             |                             |          |           |      |          |      |
| Carbon disulfide               | ND        | 0.50           |           |             |                             |          |           |      |          |      |
| Carbon tetrachloride           | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Chlorobenzene                  | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Chloroethane                   | ND        | 0.10           |           |             |                             |          |           |      |          |      |
| Chloroform                     | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Chloromethane                  | ND        | 0.15           |           |             |                             |          |           |      |          |      |
| 2-Chlorotoluene                | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 4-Chlorotoluene                | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| cis-1,2-DCE                    | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.10           |           |             |                             |          |           |      |          |      |
| Dibromochloromethane           | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Dibromomethane                 | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| 2,2-Dichloropropane            | ND        | 0.10           |           |             |                             |          |           |      |          |      |

### Qualifiers:

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E Value above quantitation range  
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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |       |                |                  |      |           |                                    |      |                     |      |
|-----------------------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID                   | <b>mb-15572</b>  |       | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:                  | <b>PBS</b>       |       | Batch ID:      | <b>15572</b>     |      | RunNo:    | <b>21567</b>                       |      |                     |      |
| Prep Date:                  | <b>9/29/2014</b> |       | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632097</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| 1,1-Dichloropropene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 2-Hexanone                  | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Isopropylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Methylene chloride          | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Butylbenzene              | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Propylbenzene             | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| sec-Butylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Styrene                     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| tert-Butylbenzene           | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,2-DCE               | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Vinyl chloride              | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Xylenes, Total              | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.39             |       | 0.5000         |                  | 78.6 | 70        | 130                                |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.39             |       | 0.5000         |                  | 78.3 | 70        | 130                                |      |                     |      |
| Surr: Toluene-d8            | 0.45             |       | 0.5000         |                  | 89.7 | 70        | 130                                |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.43             |       | 0.5000         |                  | 85.4 | 70        | 130                                |      |                     |      |

|               |                  |       |                |                  |      |           |                                    |      |                     |      |
|---------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID     | <b>lcs-15572</b> |       | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:    | <b>LCSS</b>      |       | Batch ID:      | <b>15572</b>     |      | RunNo:    | <b>21567</b>                       |      |                     |      |
| Prep Date:    | <b>9/29/2014</b> |       | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632098</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| Benzene       | 0.95             | 0.050 | 1.000          | 0                | 95.1 | 70        | 130                                |      |                     |      |
| Toluene       | 0.96             | 0.050 | 1.000          | 0                | 96.3 | 70        | 130                                |      |                     |      |
| Chlorobenzene | 0.92             | 0.050 | 1.000          | 0                | 92.5 | 70        | 130                                |      |                     |      |

### Qualifiers:

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S Spike Recovery outside accepted recovery limits

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |       |                          |             |      |                                       |           |              |          |      |
|-----------------------------|-----------|-------|--------------------------|-------------|------|---------------------------------------|-----------|--------------|----------|------|
| Sample ID                   | lcs-15572 |       | SampType: LCS            |             |      | TestCode: EPA Method 8260B: Volatiles |           |              |          |      |
| Client ID:                  | LCSS      |       | Batch ID: 15572          |             |      | RunNo: 21567                          |           |              |          |      |
| Prep Date:                  | 9/29/2014 |       | Analysis Date: 10/1/2014 |             |      | SeqNo: 632098                         |           | Units: mg/Kg |          |      |
| Analyte                     | Result    | PQL   | SPK value                | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD         | RPDLimit | Qual |
| 1,1-Dichloroethene          | 1.0       | 0.050 | 1.000                    | 0           | 101  | 60.5                                  | 160       |              |          |      |
| Trichloroethene (TCE)       | 0.94      | 0.050 | 1.000                    | 0           | 93.5 | 58.8                                  | 139       |              |          |      |
| Surr: Dibromofluoromethane  | 0.40      |       | 0.5000                   |             | 79.1 | 70                                    | 130       |              |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.39      |       | 0.5000                   |             | 77.7 | 70                                    | 130       |              |          |      |
| Surr: Toluene-d8            | 0.44      |       | 0.5000                   |             | 88.2 | 70                                    | 130       |              |          |      |
| Surr: 4-Bromofluorobenzene  | 0.42      |       | 0.5000                   |             | 85.0 | 70                                    | 130       |              |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |         |                          |             |                                           |          |              |      |          |      |
|--------------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15569  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                     | PBS       |         | Batch ID: 15569          |             | RunNo: 21530                              |          |              |      |          |      |
| Prep Date:                     | 9/29/2014 |         | Analysis Date: 9/29/2014 |             | SeqNo: 629909                             |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Toluene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Xylenes, Total                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| Acetone                        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromoform                      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromomethane                   | ND        | 0.00300 |                          |             |                                           |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroform                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloromethane                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |         |                |                  |      |           |                                        |      |                     |      |
|-----------------------------|------------------|---------|----------------|------------------|------|-----------|----------------------------------------|------|---------------------|------|
| Sample ID                   | <b>mb-15569</b>  |         | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>Method 8260B/5035LOW: VOLATILES</b> |      |                     |      |
| Client ID:                  | <b>PBS</b>       |         | Batch ID:      | <b>15569</b>     |      | RunNo:    | <b>21530</b>                           |      |                     |      |
| Prep Date:                  | <b>9/29/2014</b> |         | Analysis Date: | <b>9/29/2014</b> |      | SeqNo:    | <b>629909</b>                          |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL     | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                              | %RPD | RPDLimit            | Qual |
| 2,2-Dichloropropane         | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1-Dichloropropene         | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Isopropylbenzene            | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Methylene chloride          | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| n-Butylbenzene              | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 2-Hexanone                  | ND               | 0.0100  |                |                  |      |           |                                        |      |                     |      |
| n-Propylbenzene             | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| sec-Butylbenzene            | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Styrene                     | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.0100  |                |                  |      |           |                                        |      |                     |      |
| tert-Butylbenzene           | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| trans-1,2-DCE               | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Vinyl chloride              | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0201           |         | 0.02000        |                  | 100  | 70        | 130                                    |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.0230           |         | 0.02000        |                  | 115  | 65.3      | 135                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.0204           |         | 0.02000        |                  | 102  | 70        | 130                                    |      |                     |      |
| Surr: Toluene-d8            | 0.0202           |         | 0.02000        |                  | 101  | 70        | 130                                    |      |                     |      |

|               |                  |         |                |                  |      |           |                                        |      |                     |      |
|---------------|------------------|---------|----------------|------------------|------|-----------|----------------------------------------|------|---------------------|------|
| Sample ID     | <b>ics-15569</b> |         | SampType:      | <b>LCS</b>       |      | TestCode: | <b>Method 8260B/5035LOW: VOLATILES</b> |      |                     |      |
| Client ID:    | <b>LCSS</b>      |         | Batch ID:      | <b>15569</b>     |      | RunNo:    | <b>21530</b>                           |      |                     |      |
| Prep Date:    | <b>9/29/2014</b> |         | Analysis Date: | <b>9/29/2014</b> |      | SeqNo:    | <b>629915</b>                          |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL     | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                              | %RPD | RPDLimit            | Qual |
| Benzene       | 0.0100           | 0.00200 | 0.01000        | 0                | 100  | 70        | 130                                    |      |                     |      |
| Toluene       | 0.00993          | 0.00200 | 0.01000        | 0                | 99.3 | 70        | 130                                    |      |                     |      |
| Chlorobenzene | 0.0100           | 0.00200 | 0.01000        | 0                | 100  | 70        | 130                                    |      |                     |      |

### Qualifiers:

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |      |                                           |           |              |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                   | lcs-15569 |         | SampType: LCS            |             |      | TestCode: Method 8260B/5035LOW: VOLATILES |           |              |          |      |
| Client ID:                  | LCSS      |         | Batch ID: 15569          |             |      | RunNo: 21530                              |           |              |          |      |
| Prep Date:                  | 9/29/2014 |         | Analysis Date: 9/29/2014 |             |      | SeqNo: 629915                             |           | Units: mg/Kg |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.00922   | 0.00200 | 0.01000                  | 0           | 92.2 | 70                                        | 130       |              |          |      |
| Trichloroethene (TCE)       | 0.00959   | 0.00200 | 0.01000                  | 0           | 95.9 | 61.6                                      | 131       |              |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0218    |         | 0.02000                  |             | 109  | 70                                        | 130       |              |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0224    |         | 0.02000                  |             | 112  | 65.3                                      | 135       |              |          |      |
| Surr: Dibromofluoromethane  | 0.0205    |         | 0.02000                  |             | 103  | 70                                        | 130       |              |          |      |
| Surr: Toluene-d8            | 0.0202    |         | 0.02000                  |             | 101  | 70                                        | 130       |              |          |      |

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S Spike Recovery outside accepted recovery limits

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15576  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15576          |             | RunNo: 21591                              |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |      | Analysis Date: 10/1/2014 |             | SeqNo: 632834                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |                                           |          |              |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15576  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 15576     | RunNo:      | 21591                           |          |           |      |          |      |
| Prep Date:                 | 9/29/2014 | Analysis Date: | 10/1/2014 | SeqNo:      | 632834                          | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 2.3       |                | 3.330     |             | 68.5                            | 21       | 111       |      |          |      |
| Surr: Phenol-d5            | 2.3       |                | 3.330     |             | 69.7                            | 23.1     | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.8       |                | 3.330     |             | 55.4                            | 22.7     | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |                | 1.670     |             | 75.1                            | 24.5     | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.2       |                | 1.670     |             | 70.9                            | 21.2     | 129       |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |                | 1.670     |             | 76.0                            | 39.4     | 107       |      |          |      |

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | lcs-15576 |      | SampType: LCS            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15576          |             |      | RunNo: 21591                              |           |              |          |      |
| Prep Date:                 | 9/29/2014 |      | Analysis Date: 10/1/2014 |             |      | SeqNo: 632836                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Acenaphthene               | 1.3       | 0.20 | 1.670                    | 0           | 76.1 | 50.7                                      | 110       |              |          |      |
| 4-Chloro-3-methylphenol    | 3.0       | 0.50 | 3.330                    | 0           | 91.1 | 47.8                                      | 107       |              |          |      |
| 2-Chlorophenol             | 2.6       | 0.20 | 3.330                    | 0           | 79.2 | 45.7                                      | 108       |              |          |      |
| 1,4-Dichlorobenzene        | 1.1       | 0.20 | 1.670                    | 0           | 65.7 | 46.1                                      | 112       |              |          |      |
| 2,4-Dinitrotoluene         | 1.2       | 0.50 | 1.670                    | 0           | 73.5 | 44.9                                      | 114       |              |          |      |
| N-Nitrosodi-n-propylamine  | 1.0       | 0.20 | 1.670                    | 0           | 61.7 | 38.7                                      | 128       |              |          |      |
| 4-Nitrophenol              | 2.6       | 0.25 | 3.330                    | 0           | 78.3 | 40.2                                      | 103       |              |          |      |
| Pentachlorophenol          | 1.3       | 0.40 | 3.330                    | 0           | 39.8 | 32.9                                      | 94        |              |          |      |
| Phenol                     | 2.7       | 0.20 | 3.330                    | 0           | 81.0 | 44.1                                      | 109       |              |          |      |
| Pyrene                     | 1.3       | 0.20 | 1.670                    | 0           | 80.6 | 51.9                                      | 109       |              |          |      |
| 1,2,4-Trichlorobenzene     | 1.2       | 0.20 | 1.670                    | 0           | 74.2 | 49.5                                      | 115       |              |          |      |
| Surr: 2-Fluorophenol       | 2.3       |      | 3.330                    |             | 68.4 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.5       |      | 3.330                    |             | 74.0 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.4       |      | 3.330                    |             | 72.5 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.4       |      | 1.670                    |             | 82.1 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 78.1 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.5       |      | 1.670                    |             | 87.4 | 39.4                                      | 107       |              |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |       |                |             |      |           |                          |      |              |      |  |
|------------|-----------|-------|----------------|-------------|------|-----------|--------------------------|------|--------------|------|--|
| Sample ID  | MB-15734  |       | SampType:      | MBLK        |      | TestCode: | EPA Method 7471: Mercury |      |              |      |  |
| Client ID: | PBS       |       | Batch ID:      | 15734       |      | RunNo:    | 21721                    |      |              |      |  |
| Prep Date: | 10/6/2014 |       | Analysis Date: | 10/7/2014   |      | SeqNo:    | 637705                   |      | Units: mg/Kg |      |  |
| Analyte    | Result    | PQL   | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                | %RPD | RPDLimit     | Qual |  |
| Mercury    | ND        | 0.033 |                |             |      |           |                          |      |              |      |  |

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | LCS-15734 |       | SampType: LCS            |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | LCSS      |       | Batch ID: 15734          |             | RunNo: 21721                       |          |              |      |          |      |
| Prep Date: | 10/6/2014 |       | Analysis Date: 10/7/2014 |             | SeqNo: 637706                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercury    | 0.17      | 0.033 | 0.1667                   | 0           | 105                                | 80       | 120          |      |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E42

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>MB-15684</b>  |      | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>PBS</b>       |      | Batch ID:      | <b>15684</b>     |      | RunNo:    | <b>21647</b>                         |      |                     |      |
| Prep Date: | <b>10/2/2014</b> |      | Analysis Date: | <b>10/3/2014</b> |      | SeqNo:    | <b>635290</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Arsenic    | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Barium     | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Beryllium  | ND               | 0.15 |                |                  |      |           |                                      |      |                     |      |
| Cadmium    | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Chromium   | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Cobalt     | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Lead       | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Nickel     | ND               | 0.50 |                |                  |      |           |                                      |      |                     |      |
| Selenium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Silver     | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Vanadium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Zinc       | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>LCS-15684</b> |      | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>LCSS</b>      |      | Batch ID:      | <b>15684</b>     |      | RunNo:    | <b>21647</b>                         |      |                     |      |
| Prep Date: | <b>10/2/2014</b> |      | Analysis Date: | <b>10/3/2014</b> |      | SeqNo:    | <b>635291</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | 26               | 2.5  | 25.00          | 0                | 103  | 80        | 120                                  |      |                     |      |
| Arsenic    | 25               | 2.5  | 25.00          | 0                | 100  | 80        | 120                                  |      |                     |      |
| Barium     | 26               | 0.10 | 25.00          | 0                | 103  | 80        | 120                                  |      |                     |      |
| Beryllium  | 26               | 0.15 | 25.00          | 0                | 104  | 80        | 120                                  |      |                     |      |
| Cadmium    | 25               | 0.10 | 25.00          | 0                | 99.3 | 80        | 120                                  |      |                     |      |
| Chromium   | 26               | 0.30 | 25.00          | 0                | 103  | 80        | 120                                  |      |                     |      |
| Cobalt     | 25               | 0.30 | 25.00          | 0                | 102  | 80        | 120                                  |      |                     |      |
| Lead       | 25               | 0.25 | 25.00          | 0                | 101  | 80        | 120                                  |      |                     |      |
| Nickel     | 26               | 0.50 | 25.00          | 0                | 104  | 80        | 120                                  |      |                     |      |
| Selenium   | 25               | 2.5  | 25.00          | 0                | 99.6 | 80        | 120                                  |      |                     |      |
| Silver     | 5.1              | 0.25 | 5.000          | 0                | 102  | 80        | 120                                  |      |                     |      |
| Vanadium   | 26               | 2.5  | 25.00          | 0                | 104  | 80        | 120                                  |      |                     |      |
| Zinc       | 25               | 2.5  | 25.00          | 0                | 98.9 | 80        | 120                                  |      |                     |      |

### Qualifiers:

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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
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## Sample Log-In Check List

Client Name: **Western Refining Southw**

Work Order Number: **1409E42**

RcptNo: **1**

Received by/date: AS 09/27/14

Logged By: **Ashley Gallegos**

9/27/2014 5:45:00 AM

Completed By: **Ashley Gallegos**

9/27/2014 2:49:25 PM

Reviewed By: AS 09/29/14

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH: \_\_\_\_\_

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.1     | Good      | Yes         |         |           |           |

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

|                                                                                     |
|-------------------------------------------------------------------------------------|
| BTEX + MTBE + TMB's (8021)                                                          |
| BTEX + MTBE + TPH (Gas only)                                                        |
| TPH 8015B (GRO / DRO / MRO)                                                         |
| TPH (Method 418.1)                                                                  |
| EDB (Method 504.1)                                                                  |
| PAH's (8310 or 8270 SIMS)                                                           |
| RCRA 8 Metals                                                                       |
| Anions ( $F^{-}$ , $Cl^{-}$ , $NO_3^{-}$ , $NO_2^{-}$ , $PO_4^{3-}$ , $SO_4^{2-}$ ) |
| 8081 Pesticides / 8082 PCB's                                                        |
| 8260B (VOA)                                                                         |
| 8270 (Semi-VOA)                                                                     |
| METALS - SEE ATTACHED SHEET                                                         |
| Air Bubbles (Y or N)                                                                |

|                     |                                                                     |
|---------------------|---------------------------------------------------------------------|
| Project Manager:    | KELLY ROBINSON                                                      |
| Sampler:            | TRACY PAYNE                                                         |
| On Ice:             | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Sample Temperature: | 2.1                                                                 |

name in: SUSAN K. ROBINSON  
 email or Fax#: KELLY. ROBINSON@WNR.COM  
 QA/QC Package:  
☐ Standard ☒ Level 4 (Full Validation)  
 Accreditation:  
☐ NELAP ☐ Other \_\_\_\_\_  
 EDD (Type) EXCEL

[illegible]

| Date:   | Time: | Relinquished by:   | Received by:       | Date    | Time | Remarks: |
|---------|-------|--------------------|--------------------|---------|------|----------|
| 7/26/14 | 1420  | <del>ST</del>      | <i>Antstuhuber</i> | 9/26/14 | 1420 |          |
| 7/26/14 | 1610  | <i>Antstuhuber</i> | <del>ST</del>      | 9/27/14 | 0545 |          |

Any sub-contracted data will be clearly noted on the analytical report. This serves as notice of this possibility. Any sub-contracted laboratories. Any sub-contracted data will be clearly noted on the analytical report. This serves as notice of this possibility. Any sub-contracted laboratories.

# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                   | Analytical Method              |
|---------------------------|--------------------------------|
| Antimony                  | SW-846 method 6010/6020        |
| Arsenic                   | SW-846 method 6010/6020        |
| Barium                    | SW-846 method 6010/6020        |
| Beryllium                 | SW-846 method 6010/6020        |
| Cadmium                   | SW-846 method 6010/6020        |
| Chromium                  | SW-846 method 6010/6020        |
| <del>Chromium VI</del>    | <del>SW-846 method 6010A</del> |
| Cobalt                    | SW-846 method 6010/6020        |
| Cyanide                   | SW-846 method 335.4/335.2 mod  |
| Lead                      | SW-846 method 6010/6020        |
| <del>Tetraethyllead</del> | <del>SW-846 method 6270G</del> |
| Mercury                   | SW-846 method 7470/7471        |
| Nickel                    | SW-846 method 6010/6020        |
| Selenium                  | SW-846 method 6010/6020        |
| Silver                    | SW-846 method 6010/6020        |
| Vanadium                  | SW-846 method 6010/6020        |
| Zinc                      | SW-846 method 6010/6020        |



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

October 29, 2014

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409E43

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/27/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



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

## Case Narrative

WO#: 1409E43  
Date: 10/29/2014

---

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

---

Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-4 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 10:15:00 AM

**Lab ID:** 1409E43-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units                | DF | Date Analyzed         | Batch  |
|------------------------------------------------|--------|----------|------|----------------------|----|-----------------------|--------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      | Analyst: <b>BCN</b>  |    |                       |        |
| Diesel Range Organics (DRO)                    | 320    | 11       |      | mg/Kg-dry            | 1  | 9/30/2014 3:59:59 PM  | 15574  |
| Motor Oil Range Organics (MRO)                 | 410    | 56       |      | mg/Kg-dry            | 1  | 9/30/2014 3:59:59 PM  | 15574  |
| Surr: DNOP                                     | 127    | 57.9-140 |      | %REC                 | 1  | 9/30/2014 3:59:59 PM  | 15574  |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      | Analyst: <b>NSB</b>  |    |                       |        |
| Gasoline Range Organics (GRO)                  | ND     | 3.8      |      | mg/Kg-dry            | 1  | 9/30/2014 2:10:30 AM  | R21528 |
| Surr: BFB                                      | 80.3   | 80-120   |      | %REC                 | 1  | 9/30/2014 2:10:30 AM  | R21528 |
| <b>PERCENT MOISTURE</b>                        |        |          |      | Analyst: <b>cadg</b> |    |                       |        |
| Percent Moisture                               | 12     | 1.0      |      | wt%                  | 1  | 9/29/2014 12:06:00 PM | R21525 |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      | Analyst: <b>MMD</b>  |    |                       |        |
| Mercury                                        | 0.069  | 0.035    |      | mg/Kg-dry            | 1  | 10/9/2014 1:17:54 PM  | 15805  |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      | Analyst: <b>ELS</b>  |    |                       |        |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Arsenic                                        | 2.9    | 2.8      |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Barium                                         | 220    | 0.11     |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Beryllium                                      | 0.46   | 0.17     |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Chromium                                       | 7.7    | 0.34     |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Cobalt                                         | 4.3    | 0.34     |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Lead                                           | 6.8    | 0.28     |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Nickel                                         | 6.3    | 0.56     |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Vanadium                                       | 24     | 2.8      |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| Zinc                                           | 40     | 2.8      |      | mg/Kg-dry            | 1  | 10/3/2014 1:04:32 PM  | 15684  |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      | Analyst: <b>JDC</b>  |    |                       |        |
| Acenaphthene                                   | ND     | 2.3      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |
| Acenaphthylene                                 | ND     | 2.3      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |
| Aniline                                        | ND     | 2.3      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |
| Anthracene                                     | ND     | 2.3      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |
| Azobenzene                                     | ND     | 2.3      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |
| Benz(a)anthracene                              | ND     | 2.3      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |
| Benzo(a)pyrene                                 | ND     | 2.3      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |
| Benzo(b)fluoranthene                           | ND     | 2.3      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |
| Benzo(g,h,i)perylene                           | ND     | 2.3      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |
| Benzo(k)fluoranthene                           | ND     | 2.3      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |
| Benzoic acid                                   | ND     | 5.6      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |
| Benzyl alcohol                                 | ND     | 2.3      |      | mg/Kg-dry            | 1  | 10/2/2014 5:21:25 PM  | 15576  |

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-4 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 10:15:00 AM

**Lab ID:** 1409E43-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Carbazole                              | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 4-Chloroaniline                        | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 2.8 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 2-Chlorophenol                         | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Chrysene                               | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 4.5 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Dibenzofuran                           | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.8 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Diethyl phthalate                      | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Dimethyl phthalate                     | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 4.5 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 3.4 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Fluoranthene                           | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Fluorene                               | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Hexachlorobenzene                      | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Hexachloroethane                       | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| Isophorone                             | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576        |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-4 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 10:15:00 AM

**Lab ID:** 1409E43-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND     | 5.6       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| 3+4-Methylphenol                       | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| N-Nitrosodi-n-propylamine              | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| N-Nitrosodiphenylamine                 | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Naphthalene                            | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| 2-Nitroaniline                         | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| 3-Nitroaniline                         | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| 4-Nitroaniline                         | ND     | 4.5       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Nitrobenzene                           | ND     | 5.6       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| 2-Nitrophenol                          | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| 4-Nitrophenol                          | ND     | 2.8       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Pentachlorophenol                      | ND     | 4.5       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Phenanthrene                           | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Phenol                                 | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Pyrene                                 | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Pyridine                               | ND     | 5.6       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| 1,2,4-Trichlorobenzene                 | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| 2,4,5-Trichlorophenol                  | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| 2,4,6-Trichlorophenol                  | ND     | 2.3       |      | mg/Kg-dry | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Surr: 2-Fluorophenol                   | 82.7   | 21-111    |      | %REC      | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Surr: Phenol-d5                        | 85.5   | 23.1-117  |      | %REC      | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Surr: 2,4,6-Tribromophenol             | 59.9   | 22.7-88.9 |      | %REC      | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Surr: Nitrobenzene-d5                  | 91.0   | 24.5-126  |      | %REC      | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Surr: 2-Fluorobiphenyl                 | 88.8   | 21.2-129  |      | %REC      | 1  | 10/2/2014 5:21:25 PM | 15576         |
| Surr: 4-Terphenyl-d14                  | 88.0   | 39.4-107  |      | %REC      | 1  | 10/2/2014 5:21:25 PM | 15576         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | ND     | 0.00216   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Toluene                                | ND     | 0.00216   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Ethylbenzene                           | ND     | 0.00216   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Xylenes, Total                         | ND     | 0.00216   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00216   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00216   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00216   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00216   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00216   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Naphthalene                            | ND     | 0.00216   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1-Methylnaphthalene                    | ND     | 0.00433   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 2-Methylnaphthalene                    | ND     | 0.00433   |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Acetone                                | ND     | 0.0108    |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-4 (0.5-2')

Project: GROUP 9

Collection Date: 9/25/2014 10:15:00 AM

Lab ID: 1409E43-001

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Bromodichloromethane                   | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Bromoform                              | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Bromomethane                           | ND     | 0.00325 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 2-Butanone                             | ND     | 0.0108  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Carbon tetrachloride                   | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Chlorobenzene                          | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Chloroethane                           | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Chloroform                             | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Chloromethane                          | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 2-Chlorotoluene                        | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Carbon disulfide                       | ND     | 0.0108  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 4-Chlorotoluene                        | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| cis-1,2-DCE                            | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| cis-1,3-Dichloropropene                | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Dibromochloromethane                   | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Dibromomethane                         | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,2-Dichlorobenzene                    | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,3-Dichlorobenzene                    | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,4-Dichlorobenzene                    | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Dichlorodifluoromethane                | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,1-Dichloroethane                     | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,1-Dichloroethene                     | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,2-Dichloropropane                    | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,3-Dichloropropane                    | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 2,2-Dichloropropane                    | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 1,1-Dichloropropene                    | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Hexachlorobutadiene                    | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Isopropylbenzene                       | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 4-Isopropyltoluene                     | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Methylene chloride                     | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| n-Butylbenzene                         | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 2-Hexanone                             | ND     | 0.0108  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| n-Propylbenzene                        | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| sec-Butylbenzene                       | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| Styrene                                | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| 4-Methyl-2-pentanone                   | ND     | 0.0108  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |
| tert-Butylbenzene                      | ND     | 0.00216 |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569         |

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

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 5 of 51 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E43**

Date Reported: **10/29/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-4 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 10:15:00 AM

**Lab ID:** 1409E43-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| Tetrachloroethene (PCE)                | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| trans-1,2-DCE                          | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| trans-1,3-Dichloropropene              | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| 1,1,1-Trichloroethane                  | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| 1,1,2-Trichloroethane                  | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| Trichloroethene (TCE)                  | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| Trichlorofluoromethane                 | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| 1,2,3-Trichloropropane                 | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| Vinyl chloride                         | ND     | 0.00216  |      | mg/Kg-dry | 1  | 9/29/2014 4:03:51 PM | 15569                |
| Surr: 1,2-Dichloroethane-d4            | 117    | 70-130   |      | %REC      | 1  | 9/29/2014 4:03:51 PM | 15569                |
| Surr: 4-Bromofluorobenzene             | 108    | 65.3-135 |      | %REC      | 1  | 9/29/2014 4:03:51 PM | 15569                |
| Surr: Dibromofluoromethane             | 109    | 70-130   |      | %REC      | 1  | 9/29/2014 4:03:51 PM | 15569                |
| Surr: Toluene-d8                       | 106    | 70-130   |      | %REC      | 1  | 9/29/2014 4:03:51 PM | 15569                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 51 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-4 (6-8")

**Project:** GROUP 9

**Collection Date:** 9/25/2014 10:25:00 AM

**Lab ID:** 1409E43-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 980    | 110      |      | mg/Kg-dry | 10 | 10/1/2014 11:36:30 AM | 15574                |
| Motor Oil Range Organics (MRO)                 | 1300   | 550      |      | mg/Kg-dry | 10 | 10/1/2014 11:36:30 AM | 15574                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 10/1/2014 11:36:30 AM | 15574                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 47     | 4.7      |      | mg/Kg-dry | 1  | 9/30/2014 2:40:35 AM  | R21528               |
| Surr: BFB                                      | 317    | 80-120   | S    | %REC      | 1  | 9/30/2014 2:40:35 AM  | R21528               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 11     | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.037    |      | mg/Kg-dry | 1  | 10/9/2014 1:19:43 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Arsenic                                        | 3.2    | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Barium                                         | 160    | 0.11     |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Beryllium                                      | 0.51   | 0.17     |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Chromium                                       | 6.6    | 0.34     |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Cobalt                                         | 5.1    | 0.34     |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Lead                                           | 4.1    | 0.28     |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Nickel                                         | 7.0    | 0.56     |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Vanadium                                       | 27     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| Zinc                                           | 32     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 1:05:46 PM  | 15684                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |
| Acenaphthylene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |
| Aniline                                        | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |
| Anthracene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |
| Azobenzene                                     | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |
| Benzoic acid                                   | ND     | 5.6      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 2.2      |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM  | 15576                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-4 (6-8")

**Project:** GROUP 9

**Collection Date:** 9/25/2014 10:25:00 AM

**Lab ID:** 1409E43-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Carbazole                              | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 4-Chloroaniline                        | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 2.8 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2-Chlorophenol                         | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Chrysene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 4.5 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Dibenzofuran                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.8 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Diethyl phthalate                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Dimethyl phthalate                     | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 4.5 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 3.3 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Fluoranthene                           | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Fluorene                               | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Hexachlorobenzene                      | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Hexachloroethane                       | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Isophorone                             | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 2.2 |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-4 (6-8")

Project: GROUP 9

Collection Date: 9/25/2014 10:25:00 AM

Lab ID: 1409E43-002

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 5.6       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 3+4-Methylphenol                       | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| N-Nitrosodi-n-propylamine              | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| N-Nitrosodiphenylamine                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Naphthalene                            | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2-Nitroaniline                         | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 3-Nitroaniline                         | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 4-Nitroaniline                         | ND     | 4.5       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Nitrobenzene                           | ND     | 5.6       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2-Nitrophenol                          | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 4-Nitrophenol                          | ND     | 2.8       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Pentachlorophenol                      | ND     | 4.5       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Phenanthrene                           | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Phenol                                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Pyrene                                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Pyridine                               | ND     | 5.6       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 1,2,4-Trichlorobenzene                 | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2,4,5-Trichlorophenol                  | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| 2,4,6-Trichlorophenol                  | ND     | 2.2       |      | mg/Kg-dry | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Surr: 2-Fluorophenol                   | 34.8   | 21-111    |      | %REC      | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Surr: Phenol-d5                        | 58.2   | 23.1-117  |      | %REC      | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Surr: 2,4,6-Tribromophenol             | 36.0   | 22.7-88.9 |      | %REC      | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Surr: Nitrobenzene-d5                  | 95.2   | 24.5-126  |      | %REC      | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Surr: 2-Fluorobiphenyl                 | 89.2   | 21.2-129  |      | %REC      | 1  | 10/2/2014 5:49:24 PM | 15576        |
| Surr: 4-Terphenyl-d14                  | 75.0   | 39.4-107  |      | %REC      | 1  | 10/2/2014 5:49:24 PM | 15576        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.047     |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Toluene                                | ND     | 0.047     |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Ethylbenzene                           | 0.050  | 0.047     |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.047     |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,2,4-Trimethylbenzene                 | 0.071  | 0.047     |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.047     |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.047     |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.047     |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Naphthalene                            | 0.13   | 0.095     |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1-Methylnaphthalene                    | ND     | 0.19      |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 2-Methylnaphthalene                    | ND     | 0.19      |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Acetone                                | ND     | 0.71      |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Bromobenzene                           | ND     | 0.047     |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-4 (6-8")

**Project:** GROUP 9

**Collection Date:** 9/25/2014 10:25:00 AM

**Lab ID:** 1409E43-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|-------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Bromoform                          | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Bromomethane                       | ND     | 0.14  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 2-Butanone                         | ND     | 0.47  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Carbon disulfide                   | ND     | 0.47  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Carbon tetrachloride               | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Chlorobenzene                      | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Chloroethane                       | ND     | 0.095 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Chloroform                         | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Chloromethane                      | ND     | 0.14  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 2-Chlorotoluene                    | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 4-Chlorotoluene                    | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| cis-1,2-DCE                        | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| cis-1,3-Dichloropropene            | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.095 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Dibromochloromethane               | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Dibromomethane                     | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,2-Dichlorobenzene                | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,3-Dichlorobenzene                | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,4-Dichlorobenzene                | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Dichlorodifluoromethane            | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,1-Dichloroethane                 | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,1-Dichloroethene                 | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,2-Dichloropropane                | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,3-Dichloropropane                | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 2,2-Dichloropropane                | ND     | 0.095 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,1-Dichloropropene                | ND     | 0.095 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Hexachlorobutadiene                | ND     | 0.095 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 2-Hexanone                         | ND     | 0.47  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Isopropylbenzene                   | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 4-Isopropyltoluene                 | 0.063  | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 4-Methyl-2-pentanone               | ND     | 0.47  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Methylene chloride                 | ND     | 0.14  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| n-Butylbenzene                     | ND     | 0.14  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| n-Propylbenzene                    | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| sec-Butylbenzene                   | 0.10   | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Styrene                            | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| tert-Butylbenzene                  | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.047 |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-4 (6-8')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 10:25:00 AM

**Lab ID:** 1409E43-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|--------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: RAA |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.047  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Tetrachloroethene (PCE)            | ND     | 0.047  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| trans-1,2-DCE                      | ND     | 0.047  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| trans-1,3-Dichloropropene          | ND     | 0.047  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,2,3-Trichlorobenzene             | ND     | 0.095  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,2,4-Trichlorobenzene             | ND     | 0.047  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,1,1-Trichloroethane              | ND     | 0.047  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,1,2-Trichloroethane              | ND     | 0.047  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Trichloroethene (TCE)              | ND     | 0.047  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Trichlorofluoromethane             | ND     | 0.047  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| 1,2,3-Trichloropropane             | ND     | 0.095  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Vinyl chloride                     | ND     | 0.047  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Xylenes, Total                     | 0.15   | 0.095  |      | mg/Kg-dry | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Surr: Dibromofluoromethane         | 76.7   | 70-130 |      | %REC      | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Surr: 1,2-Dichloroethane-d4        | 83.2   | 70-130 |      | %REC      | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Surr: Toluene-d8                   | 91.2   | 70-130 |      | %REC      | 1  | 10/2/2014 7:07:42 PM | 15572        |
| Surr: 4-Bromofluorobenzene         | 125    | 70-130 |      | %REC      | 1  | 10/2/2014 7:07:42 PM | 15572        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-4 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 11:15:00 AM

**Lab ID:** 1409E43-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 320    | 11       |      | mg/Kg-dry | 1  | 10/1/2014 10:11:09 AM | 15574                |
| Motor Oil Range Organics (MRO)                 | ND     | 53       |      | mg/Kg-dry | 1  | 10/1/2014 10:11:09 AM | 15574                |
| Surr: DNOP                                     | 95.6   | 57.9-140 |      | %REC      | 1  | 10/1/2014 10:11:09 AM | 15574                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 45     | 3.8      |      | mg/Kg-dry | 1  | 9/30/2014 3:10:30 AM  | R21528               |
| Surr: BFB                                      | 225    | 80-120   | S    | %REC      | 1  | 9/30/2014 3:10:30 AM  | R21528               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 4.8    | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.034    |      | mg/Kg-dry | 1  | 10/9/2014 1:21:32 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Arsenic                                        | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Barium                                         | 210    | 0.10     |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Beryllium                                      | 0.17   | 0.16     |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Chromium                                       | 35     | 0.31     |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Cobalt                                         | 4.8    | 0.31     |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Lead                                           | 1.1    | 0.26     |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Nickel                                         | 6.1    | 0.52     |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Vanadium                                       | 23     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| Zinc                                           | 19     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:07:00 PM  | 15684                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |
| Benzoic acid                                   | ND     | 0.53     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM  | 15576                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-4 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 11:15:00 AM

**Lab ID:** 1409E43-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 4-Chloroaniline                        | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.32 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Isophorone                             | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 1-Methylnaphthalene                    | 0.57   | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2-Methylnaphthalene                    | 0.38   | 0.21 |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-4 (24-26')

Project: GROUP 9

Collection Date: 9/25/2014 11:15:00 AM

Lab ID: 1409E43-003

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.53      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Naphthalene                            | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Nitrobenzene                           | ND     | 0.53      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Phenanthrene                           | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Pyridine                               | ND     | 0.53      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Surr: 2-Fluorophenol                   | 58.5   | 21-111    |      | %REC      | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Surr: Phenol-d5                        | 62.7   | 23.1-117  |      | %REC      | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Surr: 2,4,6-Tribromophenol             | 74.5   | 22.7-88.9 |      | %REC      | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Surr: Nitrobenzene-d5                  | 64.2   | 24.5-126  |      | %REC      | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Surr: 2-Fluorobiphenyl                 | 68.0   | 21.2-129  |      | %REC      | 1  | 10/2/2014 6:17:21 PM | 15576        |
| Surr: 4-Terphenyl-d14                  | 73.7   | 39.4-107  |      | %REC      | 1  | 10/2/2014 6:17:21 PM | 15576        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | 0.043  | 0.038     |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Toluene                                | ND     | 0.038     |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Ethylbenzene                           | 0.11   | 0.038     |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.038     |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,2,4-Trimethylbenzene                 | ND     | 0.038     |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,3,5-Trimethylbenzene                 | ND     | 0.038     |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.038     |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.038     |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Naphthalene                            | ND     | 0.075     |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1-Methylnaphthalene                    | 0.49   | 0.15      |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 2-Methylnaphthalene                    | 0.45   | 0.15      |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Acetone                                | ND     | 0.57      |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Bromobenzene                           | ND     | 0.038     |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-4 (24-26')

Project: GROUP 9

Collection Date: 9/25/2014 11:15:00 AM

Lab ID: 1409E43-003

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|-------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Bromoform                          | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Bromomethane                       | ND     | 0.11  |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 2-Butanone                         | ND     | 0.38  |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Carbon disulfide                   | ND     | 0.38  |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Carbon tetrachloride               | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Chlorobenzene                      | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Chloroethane                       | ND     | 0.075 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Chloroform                         | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Chloromethane                      | ND     | 0.11  |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 2-Chlorotoluene                    | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 4-Chlorotoluene                    | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| cis-1,2-DCE                        | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| cis-1,3-Dichloropropene            | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.075 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Dibromochloromethane               | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Dibromomethane                     | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,2-Dichlorobenzene                | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,3-Dichlorobenzene                | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,4-Dichlorobenzene                | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Dichlorodifluoromethane            | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,1-Dichloroethane                 | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,1-Dichloroethene                 | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,2-Dichloropropane                | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,3-Dichloropropane                | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 2,2-Dichloropropane                | ND     | 0.075 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,1-Dichloropropene                | ND     | 0.075 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Hexachlorobutadiene                | ND     | 0.075 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 2-Hexanone                         | ND     | 0.38  |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Isopropylbenzene                   | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 4-Isopropyltoluene                 | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 4-Methyl-2-pentanone               | ND     | 0.38  |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Methylene chloride                 | ND     | 0.11  |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| n-Butylbenzene                     | ND     | 0.11  |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| n-Propylbenzene                    | 0.059  | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| sec-Butylbenzene                   | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| Styrene                            | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| tert-Butylbenzene                  | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.038 |      | mg/Kg-dry | 1  | 10/2/2014 7:35:48 PM | 15572        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-4 (24-26')

Project: GROUP 9

Collection Date: 9/25/2014 11:15:00 AM

Lab ID: 1409E43-003

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL     | Qual | Units        | DF | Date Analyzed        | Batch |
|------------------------------------|--------|--------|------|--------------|----|----------------------|-------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: RAA |    |                      |       |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.038  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| Tetrachloroethene (PCE)            | ND     | 0.038  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| trans-1,2-DCE                      | ND     | 0.038  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| trans-1,3-Dichloropropene          | ND     | 0.038  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| 1,2,3-Trichlorobenzene             | ND     | 0.075  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| 1,2,4-Trichlorobenzene             | ND     | 0.038  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| 1,1,1-Trichloroethane              | ND     | 0.038  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| 1,1,2-Trichloroethane              | ND     | 0.038  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| Trichloroethene (TCE)              | ND     | 0.038  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| Trichlorofluoromethane             | ND     | 0.038  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| 1,2,3-Trichloropropane             | ND     | 0.075  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| Vinyl chloride                     | ND     | 0.038  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| Xylenes, Total                     | 0.32   | 0.075  |      | mg/Kg-dry    | 1  | 10/2/2014 7:35:48 PM | 15572 |
| Surr: Dibromofluoromethane         | 79.7   | 70-130 |      | %REC         | 1  | 10/2/2014 7:35:48 PM | 15572 |
| Surr: 1,2-Dichloroethane-d4        | 83.7   | 70-130 |      | %REC         | 1  | 10/2/2014 7:35:48 PM | 15572 |
| Surr: Toluene-d8                   | 90.3   | 70-130 |      | %REC         | 1  | 10/2/2014 7:35:48 PM | 15572 |
| Surr: 4-Bromofluorobenzene         | 106    | 70-130 |      | %REC         | 1  | 10/2/2014 7:35:48 PM | 15572 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|             |   |                                                 |    |                                                    |               |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 16 of 51 |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E43**

Date Reported: **10/29/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 4:35:00 PM

**Lab ID:** 1409E43-004

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 74     | 10       |      | mg/Kg-dry | 1  | 10/1/2014 10:32:21 AM | 15574                |
| Motor Oil Range Organics (MRO)                 | 110    | 52       |      | mg/Kg-dry | 1  | 10/1/2014 10:32:21 AM | 15574                |
| Surr: DNOP                                     | 73.2   | 57.9-140 |      | %REC      | 1  | 10/1/2014 10:32:21 AM | 15574                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 4.1      |      | mg/Kg-dry | 1  | 10/4/2014 12:29:13 AM | R21650               |
| Surr: BFB                                      | 91.0   | 80-120   |      | %REC      | 1  | 10/4/2014 12:29:13 AM | R21650               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 4.7    | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.31   | 0.036    |      | mg/Kg-dry | 1  | 10/9/2014 1:23:22 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Arsenic                                        | 3.9    | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Barium                                         | 180    | 0.10     |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Beryllium                                      | 0.36   | 0.16     |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Cadmium                                        | 0.19   | 0.10     |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Chromium                                       | 7.6    | 0.31     |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Cobalt                                         | 4.1    | 0.31     |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Lead                                           | 6.5    | 0.26     |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Nickel                                         | 6.8    | 0.52     |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Vanadium                                       | 22     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| Zinc                                           | 58     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:08:14 PM  | 15684                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |
| Acenaphthylene                                 | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |
| Aniline                                        | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |
| Anthracene                                     | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |
| Azobenzene                                     | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |
| Benzoic acid                                   | ND     | 5.2      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM  | 15576                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 4:35:00 PM

**Lab ID:** 1409E43-004

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.2 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Carbazole                              | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 5.2 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 4-Chloroaniline                        | ND     | 5.2 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 2.6 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 2-Chlorophenol                         | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Chrysene                               | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 5.2 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 4.2 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Dibenzofuran                           | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.6 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Diethyl phthalate                      | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Dimethyl phthalate                     | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 4.2 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 3.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.2 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 5.2 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 5.2 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 5.2 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Fluoranthene                           | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Fluorene                               | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Hexachlorobenzene                      | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Hexachloroethane                       | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| Isophorone                             | ND     | 5.2 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-5 (0-0.5')

Project: GROUP 9

Collection Date: 9/25/2014 4:35:00 PM

Lab ID: 1409E43-004

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 5.2       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| 3+4-Methylphenol                       | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| N-Nitrosodi-n-propylamine              | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| N-Nitrosodiphenylamine                 | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Naphthalene                            | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| 2-Nitroaniline                         | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| 3-Nitroaniline                         | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| 4-Nitroaniline                         | ND      | 4.2       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Nitrobenzene                           | ND      | 5.2       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| 2-Nitrophenol                          | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| 4-Nitrophenol                          | ND      | 2.6       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Pentachlorophenol                      | ND      | 4.2       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Phenanthrene                           | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Phenol                                 | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Pyrene                                 | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Pyridine                               | ND      | 5.2       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| 1,2,4-Trichlorobenzene                 | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| 2,4,5-Trichlorophenol                  | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| 2,4,6-Trichlorophenol                  | ND      | 2.1       |      | mg/Kg-dry | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Surr: 2-Fluorophenol                   | 80.4    | 21-111    |      | %REC      | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Surr: Phenol-d5                        | 88.5    | 23.1-117  |      | %REC      | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Surr: 2,4,6-Tribromophenol             | 44.7    | 22.7-88.9 |      | %REC      | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Surr: Nitrobenzene-d5                  | 88.0    | 24.5-126  |      | %REC      | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Surr: 2-Fluorobiphenyl                 | 87.4    | 21.2-129  |      | %REC      | 1  | 10/2/2014 6:45:21 PM | 15576         |
| Surr: 4-Terphenyl-d14                  | 86.4    | 39.4-107  |      | %REC      | 1  | 10/2/2014 6:45:21 PM | 15576         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | ND      | 0.00190   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Toluene                                | ND      | 0.00190   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Ethylbenzene                           | 0.00305 | 0.00190   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Xylenes, Total                         | 0.0119  | 0.00190   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00190   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,2,4-Trimethylbenzene                 | 0.00640 | 0.00190   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00190   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00190   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00190   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Naphthalene                            | ND      | 0.00190   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1-Methylnaphthalene                    | ND      | 0.00380   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 2-Methylnaphthalene                    | ND      | 0.00380   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Acetone                                | 0.0127  | 0.00949   |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 4:35:00 PM

**Lab ID:** 1409E43-004

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Bromodichloromethane                   | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Bromoform                              | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Bromomethane                           | ND     | 0.00285 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 2-Butanone                             | ND     | 0.00949 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Carbon tetrachloride                   | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Chlorobenzene                          | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Chloroethane                           | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Chloroform                             | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Chloromethane                          | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 2-Chlorotoluene                        | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Carbon disulfide                       | ND     | 0.00949 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 4-Chlorotoluene                        | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| cis-1,2-DCE                            | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| cis-1,3-Dichloropropene                | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Dibromochloromethane                   | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Dibromomethane                         | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,2-Dichlorobenzene                    | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,3-Dichlorobenzene                    | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,4-Dichlorobenzene                    | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Dichlorodifluoromethane                | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,1-Dichloroethane                     | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,1-Dichloroethene                     | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,2-Dichloropropane                    | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,3-Dichloropropane                    | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 2,2-Dichloropropane                    | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 1,1-Dichloropropene                    | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Hexachlorobutadiene                    | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Isopropylbenzene                       | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 4-Isopropyltoluene                     | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Methylene chloride                     | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| n-Butylbenzene                         | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 2-Hexanone                             | ND     | 0.00949 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| n-Propylbenzene                        | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| sec-Butylbenzene                       | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| Styrene                                | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| 4-Methyl-2-pentanone                   | ND     | 0.00949 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |
| tert-Butylbenzene                      | ND     | 0.00190 |      | mg/Kg-dry | 1  | 9/29/2014 4:32:33 PM | 15569         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-5 (0-0.5')

Project: GROUP 9

Collection Date: 9/25/2014 4:35:00 PM

Lab ID: 1409E43-004

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL       | Qual | Units         | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|----------|------|---------------|----|----------------------|-------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      | Analyst: cadg |    |                      |       |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| Tetrachloroethene (PCE)                | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| trans-1,2-DCE                          | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| trans-1,3-Dichloropropene              | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| 1,1,1-Trichloroethane                  | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| 1,1,2-Trichloroethane                  | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| Trichloroethene (TCE)                  | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| Trichlorofluoromethane                 | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| 1,2,3-Trichloropropane                 | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| Vinyl chloride                         | ND     | 0.00190  |      | mg/Kg-dry     | 1  | 9/29/2014 4:32:33 PM | 15569 |
| Surr: 1,2-Dichloroethane-d4            | 119    | 70-130   |      | %REC          | 1  | 9/29/2014 4:32:33 PM | 15569 |
| Surr: 4-Bromofluorobenzene             | 94.9   | 65.3-135 |      | %REC          | 1  | 9/29/2014 4:32:33 PM | 15569 |
| Surr: Dibromofluoromethane             | 111    | 70-130   |      | %REC          | 1  | 9/29/2014 4:32:33 PM | 15569 |
| Surr: Toluene-d8                       | 101    | 70-130   |      | %REC          | 1  | 9/29/2014 4:32:33 PM | 15569 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|             |   |                                                 |    |                                                    |               |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 21 of 51 |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E43**

Date Reported: **10/29/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 4:45:00 PM

**Lab ID:** 1409E43-005

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 10/1/2014 10:53:44 AM | 15574                |
| Motor Oil Range Organics (MRO)                 | ND     | 55       |      | mg/Kg-dry | 1  | 10/1/2014 10:53:44 AM | 15574                |
| Surr: DNOP                                     | 90.6   | 57.9-140 |      | %REC      | 1  | 10/1/2014 10:53:44 AM | 15574                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.9      |      | mg/Kg-dry | 1  | 10/2/2014 6:29:44 PM  | R21610               |
| Surr: BFB                                      | 88.6   | 80-120   |      | %REC      | 1  | 10/2/2014 6:29:44 PM  | R21610               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 9.7    | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.037    |      | mg/Kg-dry | 1  | 10/9/2014 1:28:58 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.9      |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Arsenic                                        | ND     | 2.9      |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Barium                                         | 260    | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Beryllium                                      | 0.45   | 0.17     |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Chromium                                       | 6.7    | 0.34     |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Cobalt                                         | 4.7    | 0.34     |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Lead                                           | 7.7    | 0.29     |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Nickel                                         | 6.2    | 0.57     |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Selenium                                       | ND     | 2.9      |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Silver                                         | ND     | 0.29     |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Vanadium                                       | 28     | 2.9      |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| Zinc                                           | 29     | 2.9      |      | mg/Kg-dry | 1  | 10/4/2014 1:25:47 PM  | 15704                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |
| Benzoic acid                                   | ND     | 0.55     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM  | 15576                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-5 (0.5-2')

Project: GROUP 9

Collection Date: 9/25/2014 4:45:00 PM

Lab ID: 1409E43-005

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 4-Chloroaniline                        | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.27 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.27 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.33 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| Isophorone                             | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 4:45:00 PM

**Lab ID:** 1409E43-005

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 0.55      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| 3+4-Methylphenol                       | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| N-Nitrosodi-n-propylamine              | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| N-Nitrosodiphenylamine                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Naphthalene                            | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| 2-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| 3-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| 4-Nitroaniline                         | ND      | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Nitrobenzene                           | ND      | 0.55      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| 2-Nitrophenol                          | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| 4-Nitrophenol                          | ND      | 0.27      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Pentachlorophenol                      | ND      | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Phenanthrene                           | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Phenol                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Pyrene                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Pyridine                               | ND      | 0.55      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| 2,4,5-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| 2,4,6-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Surr: 2-Fluorophenol                   | 65.4    | 21-111    |      | %REC      | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Surr: Phenol-d5                        | 61.3    | 23.1-117  |      | %REC      | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Surr: 2,4,6-Tribromophenol             | 54.2    | 22.7-88.9 |      | %REC      | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Surr: Nitrobenzene-d5                  | 64.3    | 24.5-126  |      | %REC      | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Surr: 2-Fluorobiphenyl                 | 57.3    | 21.2-129  |      | %REC      | 1  | 10/2/2014 7:13:19 PM | 15576         |
| Surr: 4-Terphenyl-d14                  | 60.9    | 39.4-107  |      | %REC      | 1  | 10/2/2014 7:13:19 PM | 15576         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | 0.00511 | 0.00206   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Toluene                                | ND      | 0.00206   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Ethylbenzene                           | 0.0299  | 0.00206   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Xylenes, Total                         | 0.0290  | 0.00206   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00206   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,2,4-Trimethylbenzene                 | 0.0267  | 0.00206   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,3,5-Trimethylbenzene                 | 0.00567 | 0.00206   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00206   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00206   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Naphthalene                            | 0.00883 | 0.00206   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1-Methylnaphthalene                    | ND      | 0.00412   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 2-Methylnaphthalene                    | ND      | 0.00412   |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Acetone                                | 0.0414  | 0.0103    |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-5 (0.5-2')

Project: GROUP 9

Collection Date: 9/25/2014 4:45:00 PM

Lab ID: 1409E43-005

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result  | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Bromodichloromethane                   | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Bromoform                              | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Bromomethane                           | ND      | 0.00309 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 2-Butanone                             | ND      | 0.0103  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Carbon tetrachloride                   | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Chlorobenzene                          | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Chloroethane                           | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Chloroform                             | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Chloromethane                          | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 2-Chlorotoluene                        | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Carbon disulfide                       | ND      | 0.0103  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 4-Chlorotoluene                        | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| cis-1,2-DCE                            | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| cis-1,3-Dichloropropene                | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,2-Dibromo-3-chloropropane            | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Dibromochloromethane                   | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Dibromomethane                         | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,2-Dichlorobenzene                    | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,3-Dichlorobenzene                    | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,4-Dichlorobenzene                    | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Dichlorodifluoromethane                | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,1-Dichloroethane                     | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,1-Dichloroethene                     | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,2-Dichloropropane                    | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,3-Dichloropropane                    | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 2,2-Dichloropropane                    | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 1,1-Dichloropropene                    | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Hexachlorobutadiene                    | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Isopropylbenzene                       | 0.00474 | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 4-Isopropyltoluene                     | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Methylene chloride                     | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| n-Butylbenzene                         | 0.00271 | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 2-Hexanone                             | ND      | 0.0103  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| n-Propylbenzene                        | 0.0140  | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| sec-Butylbenzene                       | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| Styrene                                | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| 4-Methyl-2-pentanone                   | ND      | 0.0103  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |
| tert-Butylbenzene                      | ND      | 0.00206 |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E43**

Date Reported: **10/29/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 4:45:00 PM

**Lab ID:** 1409E43-005

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| Tetrachloroethene (PCE)                | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| trans-1,2-DCE                          | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| trans-1,3-Dichloropropene              | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| 1,1,1-Trichloroethane                  | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| 1,1,2-Trichloroethane                  | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| Trichloroethene (TCE)                  | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| Trichlorofluoromethane                 | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| 1,2,3-Trichloropropane                 | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| Vinyl chloride                         | ND     | 0.00206  |      | mg/Kg-dry | 1  | 9/29/2014 5:01:17 PM | 15569                |
| Surr: 1,2-Dichloroethane-d4            | 109    | 70-130   |      | %REC      | 1  | 9/29/2014 5:01:17 PM | 15569                |
| Surr: 4-Bromofluorobenzene             | 74.1   | 65.3-135 |      | %REC      | 1  | 9/29/2014 5:01:17 PM | 15569                |
| Surr: Dibromofluoromethane             | 113    | 70-130   |      | %REC      | 1  | 9/29/2014 5:01:17 PM | 15569                |
| Surr: Toluene-d8                       | 99.8   | 70-130   |      | %REC      | 1  | 9/29/2014 5:01:17 PM | 15569                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (10-12')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 5:00:00 PM

**Lab ID:** 1409E43-006

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 1100   | 12       |      | mg/Kg-dry | 1  | 9/30/2014 6:30:09 PM  | 15574                |
| Motor Oil Range Organics (MRO)                 | 88     | 58       |      | mg/Kg-dry | 1  | 9/30/2014 6:30:09 PM  | 15574                |
| Surr: DNOP                                     | 119    | 57.9-140 |      | %REC      | 1  | 9/30/2014 6:30:09 PM  | 15574                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 16     | 4.1      |      | mg/Kg-dry | 1  | 10/2/2014 6:59:57 PM  | R21610               |
| Surr: BFB                                      | 134    | 80-120   | S    | %REC      | 1  | 10/2/2014 6:59:57 PM  | R21610               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 13     | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 10/9/2014 1:30:48 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 3.0      |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Arsenic                                        | 3.9    | 3.0      |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Barium                                         | 180    | 0.12     |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Beryllium                                      | 0.66   | 0.18     |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Cadmium                                        | ND     | 0.12     |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Chromium                                       | 8.4    | 0.36     |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Cobalt                                         | 5.3    | 0.36     |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Lead                                           | 4.6    | 0.30     |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Nickel                                         | 8.4    | 0.60     |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Selenium                                       | ND     | 3.0      |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Silver                                         | ND     | 0.30     |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Vanadium                                       | 27     | 3.0      |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| Zinc                                           | 34     | 3.0      |      | mg/Kg-dry | 1  | 10/4/2014 1:27:02 PM  | 15704                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |
| Benzoic acid                                   | ND     | 0.57     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM  | 15576                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (10-12')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 5:00:00 PM

**Lab ID:** 1409E43-006

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 4-Chloroaniline                        | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.29 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.29 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.46 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Fluorene                               | 0.25   | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Isophorone                             | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 1-Methylnaphthalene                    | 1.4    | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2-Methylnaphthalene                    | 2.5    | 0.23 |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-5 (10-12')

Project: GROUP 9

Collection Date: 9/25/2014 5:00:00 PM

Lab ID: 1409E43-006

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.57      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 3+4-Methylphenol                       | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| N-Nitrosodi-n-propylamine              | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| N-Nitrosodiphenylamine                 | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Naphthalene                            | 0.70   | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 3-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 4-Nitroaniline                         | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Nitrobenzene                           | ND     | 0.57      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2-Nitrophenol                          | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 4-Nitrophenol                          | ND     | 0.29      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Pentachlorophenol                      | ND     | 0.46      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Phenanthrene                           | 0.28   | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Phenol                                 | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Pyrene                                 | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Pyridine                               | ND     | 0.57      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2,4,5-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| 2,4,6-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Surr: 2-Fluorophenol                   | 68.4   | 21-111    |      | %REC      | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Surr: Phenol-d5                        | 70.2   | 23.1-117  |      | %REC      | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Surr: 2,4,6-Tribromophenol             | 80.4   | 22.7-88.9 |      | %REC      | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Surr: Nitrobenzene-d5                  | 79.3   | 24.5-126  |      | %REC      | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Surr: 2-Fluorobiphenyl                 | 67.2   | 21.2-129  |      | %REC      | 1  | 10/2/2014 7:41:07 PM | 15576        |
| Surr: 4-Terphenyl-d14                  | 74.0   | 39.4-107  |      | %REC      | 1  | 10/2/2014 7:41:07 PM | 15576        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | ND     | 0.21      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Toluene                                | ND     | 0.21      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Ethylbenzene                           | 1.0    | 0.21      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.21      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,2,4-Trimethylbenzene                 | 5.0    | 0.21      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,3,5-Trimethylbenzene                 | 2.0    | 0.21      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.21      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.21      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Naphthalene                            | 1.1    | 0.41      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1-Methylnaphthalene                    | 1.7    | 0.83      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 2-Methylnaphthalene                    | 3.5    | 0.83      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Acetone                                | ND     | 3.1       |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Bromobenzene                           | ND     | 0.21      |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (10-12')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 5:00:00 PM

**Lab ID:** 1409E43-006

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Bromoform                          | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Bromomethane                       | ND     | 0.62 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 2-Butanone                         | ND     | 2.1  |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Carbon disulfide                   | ND     | 2.1  |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Carbon tetrachloride               | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Chlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Chloroethane                       | ND     | 0.41 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Chloroform                         | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Chloromethane                      | ND     | 0.62 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 2-Chlorotoluene                    | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 4-Chlorotoluene                    | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| cis-1,2-DCE                        | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| cis-1,3-Dichloropropene            | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.41 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Dibromochloromethane               | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Dibromomethane                     | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,2-Dichlorobenzene                | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,3-Dichlorobenzene                | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,4-Dichlorobenzene                | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Dichlorodifluoromethane            | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,1-Dichloroethane                 | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,1-Dichloroethene                 | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,2-Dichloropropane                | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,3-Dichloropropane                | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 2,2-Dichloropropane                | ND     | 0.41 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,1-Dichloropropene                | ND     | 0.41 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Hexachlorobutadiene                | ND     | 0.41 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 2-Hexanone                         | ND     | 2.1  |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Isopropylbenzene                   | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 4-Isopropyltoluene                 | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 4-Methyl-2-pentanone               | ND     | 2.1  |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Methylene chloride                 | ND     | 0.62 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| n-Butylbenzene                     | ND     | 0.62 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| n-Propylbenzene                    | 1.0    | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| sec-Butylbenzene                   | 0.22   | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| Styrene                            | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| tert-Butylbenzene                  | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.21 |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (10-12')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 5:00:00 PM

**Lab ID:** 1409E43-006

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.21   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| Tetrachloroethene (PCE)            | ND     | 0.21   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| trans-1,2-DCE                      | ND     | 0.21   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| trans-1,3-Dichloropropene          | ND     | 0.21   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| 1,2,3-Trichlorobenzene             | ND     | 0.41   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| 1,2,4-Trichlorobenzene             | ND     | 0.21   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| 1,1,1-Trichloroethane              | ND     | 0.21   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| 1,1,2-Trichloroethane              | ND     | 0.21   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| Trichloroethene (TCE)              | ND     | 0.21   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| Trichlorofluoromethane             | ND     | 0.21   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| 1,2,3-Trichloropropane             | ND     | 0.41   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| Vinyl chloride                     | ND     | 0.21   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| Xylenes, Total                     | 4.5    | 0.41   |      | mg/Kg-dry | 5  | 10/2/2014 8:03:40 PM | 15572               |
| Surr: Dibromofluoromethane         | 78.4   | 70-130 |      | %REC      | 5  | 10/2/2014 8:03:40 PM | 15572               |
| Surr: 1,2-Dichloroethane-d4        | 83.2   | 70-130 |      | %REC      | 5  | 10/2/2014 8:03:40 PM | 15572               |
| Surr: Toluene-d8                   | 85.5   | 70-130 |      | %REC      | 5  | 10/2/2014 8:03:40 PM | 15572               |
| Surr: 4-Bromofluorobenzene         | 91.6   | 70-130 |      | %REC      | 5  | 10/2/2014 8:03:40 PM | 15572               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E43**

Date Reported: **10/29/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 5:10:00 PM

**Lab ID:** 1409E43-007

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 4500   | 100      |      | mg/Kg-dry | 10 | 10/1/2014 11:15:06 AM | 15574                |
| Motor Oil Range Organics (MRO)                 | ND     | 520      |      | mg/Kg-dry | 10 | 10/1/2014 11:15:06 AM | 15574                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 10/1/2014 11:15:06 AM | 15574                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 390    | 100      |      | mg/Kg-dry | 20 | 10/1/2014 12:57:47 AM | 15572                |
| Surr: BFB                                      | 150    | 80-120   | S    | %REC      | 20 | 10/1/2014 12:57:47 AM | 15572                |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 4.5    | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.033    |      | mg/Kg-dry | 1  | 10/9/2014 1:32:39 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/4/2014 1:28:20 PM  | 15704                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/4/2014 1:28:20 PM  | 15704                |
| Barium                                         | 360    | 0.20     |      | mg/Kg-dry | 2  | 10/4/2014 2:22:34 PM  | 15704                |
| Beryllium                                      | ND     | 0.30     |      | mg/Kg-dry | 2  | 10/4/2014 2:22:34 PM  | 15704                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/4/2014 1:28:20 PM  | 15704                |
| Chromium                                       | 3.6    | 0.30     |      | mg/Kg-dry | 1  | 10/4/2014 1:28:20 PM  | 15704                |
| Cobalt                                         | 4.2    | 0.30     |      | mg/Kg-dry | 1  | 10/4/2014 1:28:20 PM  | 15704                |
| Lead                                           | 1.7    | 0.25     |      | mg/Kg-dry | 1  | 10/4/2014 1:28:20 PM  | 15704                |
| Nickel                                         | 3.2    | 0.51     |      | mg/Kg-dry | 1  | 10/4/2014 1:28:20 PM  | 15704                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/4/2014 1:28:20 PM  | 15704                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/4/2014 1:28:20 PM  | 15704                |
| Vanadium                                       | 20     | 2.5      |      | mg/Kg-dry | 1  | 10/4/2014 1:28:20 PM  | 15704                |
| Zinc                                           | 17     | 2.5      |      | mg/Kg-dry | 1  | 10/4/2014 1:28:20 PM  | 15704                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 10/2/2014 8:09:00 PM  | 15576                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 5:10:00 PM

**Lab ID:** 1409E43-007

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF           | Date Analyzed         | Batch |
|----------------------------------------|--------|------|------|-----------|--------------|-----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           | Analyst: JDC |                       |       |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Fluorene                               | 0.41   | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1            | 10/2/2014 8:09:00 PM  | 15576 |
| 1-Methylnaphthalene                    | 19     | 1.0  |      | mg/Kg-dry | 5            | 10/2/2014 10:00:13 PM | 15576 |
| 2-Methylnaphthalene                    | 37     | 2.1  |      | mg/Kg-dry | 10           | 10/2/2014 10:27:58 PM | 15576 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 5:10:00 PM

**Lab ID:** 1409E43-007

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF  | Date Analyzed         | Batch        |
|----------------------------------------|--------|-----------|------|-----------|-----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |     |                       | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Naphthalene                            | 7.8    | 1.0       |      | mg/Kg-dry | 5   | 10/2/2014 10:00:13 PM | 15576        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Phenanthrene                           | 0.57   | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Surr: 2-Fluorophenol                   | 21.8   | 21-111    |      | %REC      | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Surr: Phenol-d5                        | 29.6   | 23.1-117  |      | %REC      | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Surr: 2,4,6-Tribromophenol             | 56.3   | 22.7-88.9 |      | %REC      | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Surr: Nitrobenzene-d5                  | 91.7   | 24.5-126  |      | %REC      | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Surr: 2-Fluorobiphenyl                 | 52.5   | 21.2-129  |      | %REC      | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| Surr: 4-Terphenyl-d14                  | 61.4   | 39.4-107  |      | %REC      | 1   | 10/2/2014 8:09:00 PM  | 15576        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |     |                       | Analyst: RAA |
| Benzene                                | ND     | 0.50      |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |
| Toluene                                | 2.6    | 0.50      |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |
| Ethylbenzene                           | 9.0    | 0.50      |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.50      |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |
| 1,2,4-Trimethylbenzene                 | 18     | 0.50      |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |
| 1,3,5-Trimethylbenzene                 | 4.4    | 0.50      |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |
| 1,2-Dichloroethane (EDC)               | ND     | 0.50      |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |
| 1,2-Dibromoethane (EDB)                | ND     | 0.50      |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |
| Naphthalene                            | 20     | 1.0       |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |
| 1-Methylnaphthalene                    | 35     | 2.0       |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |
| 2-Methylnaphthalene                    | 57     | 20        |      | mg/Kg-dry | 100 | 10/3/2014 4:20:51 PM  | 15572        |
| Acetone                                | ND     | 7.6       |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |
| Bromobenzene                           | ND     | 0.50      |      | mg/Kg-dry | 10  | 10/2/2014 8:31:30 PM  | 15572        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-5 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/25/2014 5:10:00 PM

**Lab ID:** 1409E43-007

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Bromoform                          | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Bromomethane                       | ND     | 1.5  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 2-Butanone                         | ND     | 5.0  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Carbon disulfide                   | ND     | 5.0  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Carbon tetrachloride               | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Chlorobenzene                      | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Chloroethane                       | ND     | 1.0  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Chloroform                         | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Chloromethane                      | ND     | 1.5  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 2-Chlorotoluene                    | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 4-Chlorotoluene                    | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| cis-1,2-DCE                        | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| cis-1,3-Dichloropropene            | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,2-Dibromo-3-chloropropane        | ND     | 1.0  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Dibromochloromethane               | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Dibromomethane                     | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,2-Dichlorobenzene                | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,3-Dichlorobenzene                | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,4-Dichlorobenzene                | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Dichlorodifluoromethane            | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,1-Dichloroethane                 | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,1-Dichloroethene                 | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,2-Dichloropropane                | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,3-Dichloropropane                | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 2,2-Dichloropropane                | ND     | 1.0  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,1-Dichloropropene                | ND     | 1.0  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Hexachlorobutadiene                | ND     | 1.0  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 2-Hexanone                         | ND     | 5.0  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Isopropylbenzene                   | 1.4    | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 4-Isopropyltoluene                 | 0.55   | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 4-Methyl-2-pentanone               | ND     | 5.0  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Methylene chloride                 | ND     | 1.5  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| n-Butylbenzene                     | 3.9    | 1.5  |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| n-Propylbenzene                    | 6.9    | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| sec-Butylbenzene                   | 1.3    | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Styrene                            | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| tert-Butylbenzene                  | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.50 |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E43

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-5 (24-26')

Project: GROUP 9

Collection Date: 9/25/2014 5:10:00 PM

Lab ID: 1409E43-007

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|--------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: RAA |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.50   |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Tetrachloroethene (PCE)            | ND     | 0.50   |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| trans-1,2-DCE                      | ND     | 0.50   |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| trans-1,3-Dichloropropene          | ND     | 0.50   |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,2,3-Trichlorobenzene             | ND     | 1.0    |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,2,4-Trichlorobenzene             | ND     | 0.50   |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,1,1-Trichloroethane              | ND     | 0.50   |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,1,2-Trichloroethane              | ND     | 0.50   |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Trichloroethene (TCE)              | ND     | 0.50   |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Trichlorofluoromethane             | ND     | 0.50   |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| 1,2,3-Trichloropropane             | ND     | 1.0    |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Vinyl chloride                     | ND     | 0.50   |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Xylenes, Total                     | 11     | 1.0    |      | mg/Kg-dry | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Surr: Dibromofluoromethane         | 82.5   | 70-130 |      | %REC      | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Surr: 1,2-Dichloroethane-d4        | 83.2   | 70-130 |      | %REC      | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Surr: Toluene-d8                   | 91.6   | 70-130 |      | %REC      | 10 | 10/2/2014 8:31:30 PM | 15572        |
| Surr: 4-Bromofluorobenzene         | 138    | 70-130 | S    | %REC      | 10 | 10/2/2014 8:31:30 PM | 15572        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|             |   |                                                 |    |                                                    |               |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 36 of 51 |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140930026  
**Project Name:** 1409E43

## Analytical Results Report

|                         |                                   |                        |           |                           |                    |
|-------------------------|-----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930026-001                     | <b>Sampling Date</b>   | 9/25/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E43-001C / SWMU 13-4 (0.5-2') |                        |           | <b>Sampling Time</b>      | 10:15 AM           |
| <b>Matrix</b>           | Soil                              | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                   |                        |           |                           |                    |

| Parameter | Result | Units   | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.25 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 8.2    | Percent |      | 10/1/2014     | KJS     | %moisture |           |

|                         |                                 |                        |           |                           |                    |
|-------------------------|---------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930026-002                   | <b>Sampling Date</b>   | 9/25/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E43-002C / SWMU 13-4 (6-8') |                        |           | <b>Sampling Time</b>      | 10:25 AM           |
| <b>Matrix</b>           | Soil                            | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                 |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.269 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 10.4   | Percent |       | 10/1/2014     | KJS     | %moisture |           |

|                         |                                   |                        |           |                           |                    |
|-------------------------|-----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930026-003                     | <b>Sampling Date</b>   | 9/25/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E43-003C / SWMU 13-4 (24-26') |                        |           | <b>Sampling Time</b>      | 11:15 AM           |
| <b>Matrix</b>           | Soil                              | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                   |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.243 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 4.9    | Percent |       | 10/1/2014     | KJS     | %moisture |           |

certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Thursday, October 16, 2014

# Anatek Labs, Inc.

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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140930026  
**Project Name:** 1409E43

## Analytical Results Report

|                         |                                   |                        |           |                           |                    |
|-------------------------|-----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930026-004                     | <b>Sampling Date</b>   | 9/25/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E43-004C / SWMU 13-5 (0-0.5') |                        |           | <b>Sampling Time</b>      | 4:35 PM            |
| <b>Matrix</b>           | Soil                              | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                   |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.222 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 4      | Percent |       | 10/1/2014     | KJS     | %moisture |           |

|                         |                                   |                        |           |                           |                    |
|-------------------------|-----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930026-005                     | <b>Sampling Date</b>   | 9/25/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E43-005C / SWMU 13-5 (0.5-2') |                        |           | <b>Sampling Time</b>      | 4:45 PM            |
| <b>Matrix</b>           | Soil                              | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                   |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.255 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 10     | Percent |       | 10/1/2014     | KJS     | %moisture |           |

|                         |                                   |                        |           |                           |                    |
|-------------------------|-----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930026-006                     | <b>Sampling Date</b>   | 9/25/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E43-006C / SWMU 13-5 (10-12') |                        |           | <b>Sampling Time</b>      | 5:00 PM            |
| <b>Matrix</b>           | Soil                              | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                   |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.255 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 12.4   | Percent |       | 10/1/2014     | KJS     | %moisture |           |

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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

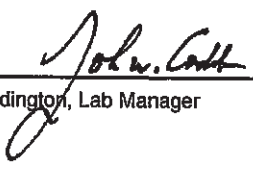
**Batch #:** 140930026  
**Project Name:** 1409E43

## Analytical Results Report

|                         |                                   |                        |           |                           |                    |
|-------------------------|-----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930026-007                     | <b>Sampling Date</b>   | 9/25/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E43-007B / SWMU 13-5 (24-26') | <b>Sampling Time</b>   | 5:10 PM   |                           |                    |
| <b>Matrix</b>           | Soil                              | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                   |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.247 | 10/7/2014     | CRW     | EPA 335.4 |           |
| %moisture | 4.5    | Percent |       | 10/1/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level  
ND Not Detected  
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.  
The results reported relate only to the samples indicated.  
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C595; MT:Cert0095; FL(NELAP): E871099

Thursday, October 16, 2014

Page 3 of 3

# Anatek Labs, Inc.

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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140930026  
**Project Name:** 1409E43

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|-----------|---------------|
| Cyanide   | 0.527      | mg/kg | 0.5       | 105.4 | 90-110  | 10/7/2014 | 10/7/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|------|---------|-----------|---------------|
| 140930030-004 | Cyanide   | ND            | 12.1      | mg/kg | 12.7     | 95.3 | 90-110  | 10/7/2014 | 10/7/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 11.9       | mg/kg | 12.7      | 93.7 | 1.7  | 0-25    | 10/7/2014 | 10/7/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/7/2014 | 10/7/2014     |

AR Acceptable Range  
ND Not Detected  
PQL Practical Quantitation Limit  
RPD Relative Percentage Difference

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Tuesday, October 16, 2014

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |                          |           |             |                                                   |          |              |      |          |      |
|--------------------------------|-----------|--------------------------|-----------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | MB-15574  | SampType: MBLK           |           |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                     | PBS       | Batch ID: 15574          |           |             | RunNo: 21538                                      |          |              |      |          |      |
| Prep Date:                     | 9/29/2014 | Analysis Date: 9/30/2014 |           |             | SeqNo: 630642                                     |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL                      | SPK value | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10                       |           |             |                                                   |          |              |      |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50                       |           |             |                                                   |          |              |      |          |      |
| Surr: DNOP                     | 11        |                          | 10.00     |             | 105                                               | 57.9     | 140          |      |          |      |

|                             |           |     |                          |             |                                                   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15574 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 15574          |             | RunNo: 21538                                      |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |     | Analysis Date: 9/30/2014 |             | SeqNo: 630643                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 51        | 10  | 50.00                    | 0           | 101                                               | 68.6     | 130          |      |          |      |
| Surr: DNOP                  | 5.3       |     | 5.000                    |             | 106                                               | 57.9     | 140          |      |          |      |

|                             |                    |     |                          |             |                                                   |          |                  |      |          |      |
|-----------------------------|--------------------|-----|--------------------------|-------------|---------------------------------------------------|----------|------------------|------|----------|------|
| Sample ID                   | 1409E43-001AMS     |     | SampType: MS             |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |                  |      |          |      |
| Client ID:                  | SWMU 13-4 (0.5-2') |     | Batch ID: 15574          |             | RunNo: 21538                                      |          |                  |      |          |      |
| Prep Date:                  | 9/29/2014          |     | Analysis Date: 9/30/2014 |             | SeqNo: 631598                                     |          | Units: mg/Kg-dry |      |          |      |
| Analyte                     | Result             | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 200                | 11  | 56.93                    | 315.0       | -210                                              | 40.1     | 152              |      |          | S    |
| Surr: DNOP                  | 6.7                |     | 5.693                    |             | 118                                               | 57.9     | 140              |      |          |      |

|                             |                    |     |                          |             |                                                   |          |                  |      |          |      |
|-----------------------------|--------------------|-----|--------------------------|-------------|---------------------------------------------------|----------|------------------|------|----------|------|
| Sample ID                   | 1409E43-001AMSD    |     | SampType: MSD            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |                  |      |          |      |
| Client ID:                  | SWMU 13-4 (0.5-2') |     | Batch ID: 15574          |             | RunNo: 21538                                      |          |                  |      |          |      |
| Prep Date:                  | 9/29/2014          |     | Analysis Date: 9/30/2014 |             | SeqNo: 631599                                     |          | Units: mg/Kg-dry |      |          |      |
| Analyte                     | Result             | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 230                | 11  | 56.87                    | 315.0       | -142                                              | 40.1     | 152              | 17.9 | 32.1     | S    |
| Surr: DNOP                  | 6.8                |     | 5.687                    |             | 119                                               | 57.9     | 140              | 0    | 0        |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID <b>B27</b>          | SampType: <b>MBLK</b>           |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |          |                     |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|----------|---------------------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21528</b>         |     |           |             | RunNo: <b>21528</b>                               |          |                     |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/29/2014</b> |     |           |             | SeqNo: <b>630004</b>                              |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |             |                                                   |          |                     |      |          |      |
| Surr: BFB                     | 880                             |     | 1000      |             | 87.8                                              | 80       | 120                 |      |          |      |

| Sample ID <b>2.5UG GRO LCS-II</b> | SampType: <b>LCS</b>            |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |          |                     |      |          |      |
|-----------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|----------|---------------------|------|----------|------|
| Client ID: <b>LCSS</b>            | Batch ID: <b>R21528</b>         |     |           |             | RunNo: <b>21528</b>                               |          |                     |      |          |      |
| Prep Date:                        | Analysis Date: <b>9/29/2014</b> |     |           |             | SeqNo: <b>630005</b>                              |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                           | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)     | 23                              | 5.0 | 25.00     | 0           | 92.0                                              | 65.8     | 139                 |      |          |      |
| Surr: BFB                         | 980                             |     | 1000      |             | 98.1                                              | 80       | 120                 |      |          |      |

| Sample ID <b>MB-15572</b>     | SampType: <b>MBLK</b>           |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |          |                     |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|----------|---------------------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>15572</b>          |     |           |             | RunNo: <b>21540</b>                               |          |                     |      |          |      |
| Prep Date: <b>9/29/2014</b>   | Analysis Date: <b>9/30/2014</b> |     |           |             | SeqNo: <b>631089</b>                              |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |             |                                                   |          |                     |      |          |      |
| Surr: BFB                     | 890                             |     | 1000      |             | 88.9                                              | 80       | 120                 |      |          |      |

| Sample ID <b>LCS-15572</b>    | SampType: <b>LCS</b>            |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |          |                     |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|----------|---------------------|------|----------|------|
| Client ID: <b>LCSS</b>        | Batch ID: <b>15572</b>          |     |           |             | RunNo: <b>21540</b>                               |          |                     |      |          |      |
| Prep Date: <b>9/29/2014</b>   | Analysis Date: <b>9/30/2014</b> |     |           |             | SeqNo: <b>631090</b>                              |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 28                              | 5.0 | 25.00     | 0           | 112                                               | 65.8     | 139                 |      |          |      |
| Surr: BFB                     | 970                             |     | 1000      |             | 97.0                                              | 80       | 120                 |      |          |      |

| Sample ID <b>5ML RB</b>       | SampType: <b>MBLK</b>           |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |          |                     |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|----------|---------------------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21610</b>         |     |           |             | RunNo: <b>21610</b>                               |          |                     |      |          |      |
| Prep Date:                    | Analysis Date: <b>10/2/2014</b> |     |           |             | SeqNo: <b>634458</b>                              |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |             |                                                   |          |                     |      |          |      |
| Surr: BFB                     | 870                             |     | 1000      |             | 87.3                                              | 80       | 120                 |      |          |      |

| Sample ID <b>2.5UG GRO LCS</b> | SampType: <b>LCS</b>            |     |           |             | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |          |                     |      |          |      |
|--------------------------------|---------------------------------|-----|-----------|-------------|---------------------------------------------------|----------|---------------------|------|----------|------|
| Client ID: <b>LCSS</b>         | Batch ID: <b>R21610</b>         |     |           |             | RunNo: <b>21610</b>                               |          |                     |      |          |      |
| Prep Date:                     | Analysis Date: <b>10/2/2014</b> |     |           |             | SeqNo: <b>634459</b>                              |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                        | Result                          | PQL | SPK value | SPK Ref Val | %REC                                              | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |

### Qualifiers:

- |                                                   |                                                      |
|---------------------------------------------------|------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |                                                      |



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                               |               |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|---------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS          |     | Batch ID: R21610         |             | RunNo: 21610                               |          |              |      |          |      |
| Prep Date:                    |               |     | Analysis Date: 10/2/2014 |             | SeqNo: 634459                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result        | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 22            | 5.0 | 25.00                    | 0           | 87.8                                       | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 970           |     | 1000                     |             | 97.1                                       | 80       | 120          |      |          |      |

|                               |                    |     |                          |             |                                            |          |                  |      |          |      |
|-------------------------------|--------------------|-----|--------------------------|-------------|--------------------------------------------|----------|------------------|------|----------|------|
| Sample ID                     | 1409E43-004AMS     |     | SampType: MS             |             | TestCode: EPA Method 8015D: Gasoline Range |          |                  |      |          |      |
| Client ID:                    | SWMU 13-5 (0-0.5') |     | Batch ID: R21610         |             | RunNo: 21610                               |          |                  |      |          |      |
| Prep Date:                    |                    |     | Analysis Date: 10/2/2014 |             | SeqNo: 634461                              |          | Units: mg/Kg-dry |      |          |      |
| Analyte                       | Result             | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 19                 | 4.1 | 20.71                    | 0           | 90.2                                       | 71.8     | 132              |      |          |      |
| Surr: BFB                     | 760                |     | 828.6                    |             | 91.8                                       | 80       | 120              |      |          |      |

|                               |                    |     |                |             |      |           |                                  |      |                  |      |  |
|-------------------------------|--------------------|-----|----------------|-------------|------|-----------|----------------------------------|------|------------------|------|--|
| Sample ID                     | 1409E43-004AMSD    |     | SampType:      | MSD         |      | TestCode: | EPA Method 8015D: Gasoline Range |      |                  |      |  |
| Client ID:                    | SWMU 13-5 (0-0.5') |     | Batch ID:      | R21610      |      | RunNo:    | 21610                            |      |                  |      |  |
| Prep Date:                    |                    |     | Analysis Date: | 10/2/2014   |      | SeqNo:    | 634462                           |      | Units: mg/Kg-dry |      |  |
| Analyte                       | Result             | PQL | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                        | %RPD | RPDLimit         | Qual |  |
| Gasoline Range Organics (GRO) | 18                 | 4.1 | 20.71          | 0           | 87.4 | 71.8      | 132                              | 3.20 | 20               |      |  |
| Surr: BFB                     | 750                |     | 828.6          |             | 90.9 | 80        | 120                              | 0    | 0                |      |  |

|                               |             |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|-------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | MB-15674 MK |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | PBS         |     | Batch ID: R21650         |             | RunNo: 21650                               |          |              |      |          |      |
| Prep Date:                    |             |     | Analysis Date: 10/3/2014 |             | SeqNo: 635786                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result      | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND          | 5.0 |                          |             |                                            |          |              |      |          |      |
| Surr: BFB                     | 900         |     | 1000                     |             | 90.0                                       | 80       | 120          |      |          |      |

|                               |              |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|--------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | LCS-15674 MK |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS         |     | Batch ID: R21650         |             | RunNo: 21650                               |          |              |      |          |      |
| Prep Date:                    |              |     | Analysis Date: 10/3/2014 |             | SeqNo: 635787                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result       | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26           | 5.0 | 25.00                    | 0           | 105                                        | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 1000         |     | 1000                     |             | 100                                        | 80       | 120          |      |          |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |       |                          |             |                                       |          |              |      |          |      |
|--------------------------------|-----------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15572  |       | SampType: MBLK           |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                     | PBS       |       | Batch ID: 15572          |             | RunNo: 21567                          |          |              |      |          |      |
| Prep Date:                     | 9/29/2014 |       | Analysis Date: 10/1/2014 |             | SeqNo: 632097                         |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL   | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Toluene                        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Naphthalene                    | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.20  |                          |             |                                       |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.20  |                          |             |                                       |          |              |      |          |      |
| Acetone                        | ND        | 0.75  |                          |             |                                       |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Bromoform                      | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Bromomethane                   | ND        | 0.15  |                          |             |                                       |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.50  |                          |             |                                       |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.50  |                          |             |                                       |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Chloroethane                   | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |
| Chloroform                     | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Chloromethane                  | ND        | 0.15  |                          |             |                                       |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.050 |                          |             |                                       |          |              |      |          |      |
| 2,2-Dichloropropane            | ND        | 0.10  |                          |             |                                       |          |              |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |       |                |                  |      |           |                                    |      |                     |      |
|-----------------------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID                   | <b>mb-15572</b>  |       | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:                  | <b>PBS</b>       |       | Batch ID:      | <b>15572</b>     |      | RunNo:    | <b>21567</b>                       |      |                     |      |
| Prep Date:                  | <b>9/29/2014</b> |       | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632097</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| 1,1-Dichloropropene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 2-Hexanone                  | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Isopropylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.50  |                |                  |      |           |                                    |      |                     |      |
| Methylene chloride          | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Butylbenzene              | ND               | 0.15  |                |                  |      |           |                                    |      |                     |      |
| n-Propylbenzene             | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| sec-Butylbenzene            | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Styrene                     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| tert-Butylbenzene           | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,2-DCE               | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Vinyl chloride              | ND               | 0.050 |                |                  |      |           |                                    |      |                     |      |
| Xylenes, Total              | ND               | 0.10  |                |                  |      |           |                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.39             |       | 0.5000         |                  | 78.6 | 70        | 130                                |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.39             |       | 0.5000         |                  | 78.3 | 70        | 130                                |      |                     |      |
| Surr: Toluene-d8            | 0.45             |       | 0.5000         |                  | 89.7 | 70        | 130                                |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.43             |       | 0.5000         |                  | 85.4 | 70        | 130                                |      |                     |      |

|               |                  |       |                |                  |      |           |                                    |      |                     |      |
|---------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID     | <b>lcs-15572</b> |       | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8260B: Volatiles</b> |      |                     |      |
| Client ID:    | <b>LCSS</b>      |       | Batch ID:      | <b>15572</b>     |      | RunNo:    | <b>21567</b>                       |      |                     |      |
| Prep Date:    | <b>9/29/2014</b> |       | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632098</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| Benzene       | 0.95             | 0.050 | 1.000          | 0                | 95.1 | 70        | 130                                |      |                     |      |
| Toluene       | 0.96             | 0.050 | 1.000          | 0                | 96.3 | 70        | 130                                |      |                     |      |
| Chlorobenzene | 0.92             | 0.050 | 1.000          | 0                | 92.5 | 70        | 130                                |      |                     |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |       |                          |             |                                       |          |              |      |          |      |
|-----------------------------|-----------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | lcs-15572 |       | SampType: LCS            |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                  | LCSS      |       | Batch ID: 15572          |             | RunNo: 21567                          |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |       | Analysis Date: 10/1/2014 |             | SeqNo: 632098                         |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL   | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 1.0       | 0.050 | 1.000                    | 0           | 101                                   | 60.5     | 160          |      |          |      |
| Trichloroethene (TCE)       | 0.94      | 0.050 | 1.000                    | 0           | 93.5                                  | 58.8     | 139          |      |          |      |
| Surr: Dibromofluoromethane  | 0.40      |       | 0.5000                   |             | 79.1                                  | 70       | 130          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.39      |       | 0.5000                   |             | 77.7                                  | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.44      |       | 0.5000                   |             | 88.2                                  | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.42      |       | 0.5000                   |             | 85.0                                  | 70       | 130          |      |          |      |

|                             |        |                          |           |             |                                       |          |             |      |          |      |
|-----------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID                   | 5ml rb | SampType: MBLK           |           |             | TestCode: EPA Method 8260B: Volatiles |          |             |      |          |      |
| Client ID:                  | PBS    | Batch ID: R21643         |           |             | RunNo: 21643                          |          |             |      |          |      |
| Prep Date:                  |        | Analysis Date: 10/2/2014 |           |             | SeqNo: 635213                         |          | Units: %REC |      |          |      |
| Analyte                     | Result | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: Dibromofluoromethane  | 0.42   |                          | 0.5000    |             | 83.1                                  | 70       | 130         |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.42   |                          | 0.5000    |             | 84.6                                  | 70       | 130         |      |          |      |
| Surr: Toluene-d8            | 0.43   |                          | 0.5000    |             | 86.6                                  | 70       | 130         |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.50   |                          | 0.5000    |             | 99.0                                  | 70       | 130         |      |          |      |

|                             |           |                          |           |             |                                       |          |             |      |          |      |
|-----------------------------|-----------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID                   | 100ng lcs | SampType: LCS            |           |             | TestCode: EPA Method 8260B: Volatiles |          |             |      |          |      |
| Client ID:                  | LCSS      | Batch ID: R21643         |           |             | RunNo: 21643                          |          |             |      |          |      |
| Prep Date:                  |           | Analysis Date: 10/2/2014 |           |             | SeqNo: 635214                         |          | Units: %REC |      |          |      |
| Analyte                     | Result    | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: Dibromofluoromethane  | 0.43      |                          | 0.5000    |             | 85.6                                  | 70       | 130         |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.42      |                          | 0.5000    |             | 83.4                                  | 70       | 130         |      |          |      |
| Surr: Toluene-d8            | 0.44      |                          | 0.5000    |             | 87.5                                  | 70       | 130         |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.52      |                          | 0.5000    |             | 104                                   | 70       | 130         |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |         |                          |             |                                           |          |              |      |          |      |
|--------------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15569  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                     | PBS       |         | Batch ID: 15569          |             | RunNo: 21530                              |          |              |      |          |      |
| Prep Date:                     | 9/29/2014 |         | Analysis Date: 9/29/2014 |             | SeqNo: 629909                             |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Toluene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Xylenes, Total                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| Acetone                        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromoform                      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromomethane                   | ND        | 0.00300 |                          |             |                                           |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroform                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloromethane                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
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S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15569  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | PBS       |         | Batch ID: 15569          |             | RunNo: 21530                              |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |         | Analysis Date: 9/29/2014 |             | SeqNo: 629909                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 2,2-Dichloropropane         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloropropene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Hexachlorobutadiene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Isopropylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Isopropyltoluene          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methylene chloride          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| n-Butylbenzene              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Hexanone                  | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| n-Propylbenzene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| sec-Butylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Styrene                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Methyl-2-pentanone        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| tert-Butylbenzene           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Tetrachloroethene (PCE)     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,2-DCE               | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,3-Dichloropropene   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichloroethene (TCE)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichlorofluoromethane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichloropropane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Vinyl chloride              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0201    |         | 0.02000                  |             | 100                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0230    |         | 0.02000                  |             | 115                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0204    |         | 0.02000                  |             | 102                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0202    |         | 0.02000                  |             | 101                                       | 70       | 130          |      |          |      |

|               |           |         |                          |             |                                           |          |              |      |          |      |
|---------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID     | ics-15569 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:    | LCSS      |         | Batch ID: 15569          |             | RunNo: 21530                              |          |              |      |          |      |
| Prep Date:    | 9/29/2014 |         | Analysis Date: 9/29/2014 |             | SeqNo: 629915                             |          | Units: mg/Kg |      |          |      |
| Analyte       | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene       | 0.0100    | 0.00200 | 0.01000                  | 0           | 100                                       | 70       | 130          |      |          |      |
| Toluene       | 0.00993   | 0.00200 | 0.01000                  | 0           | 99.3                                      | 70       | 130          |      |          |      |
| Chlorobenzene | 0.0100    | 0.00200 | 0.01000                  | 0           | 100                                       | 70       | 130          |      |          |      |

### Qualifiers:

|   |                                                 |    |                                                    |
|---|-------------------------------------------------|----|----------------------------------------------------|
| * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
| E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
| O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
| R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
| S | Spike Recovery outside accepted recovery limits |    |                                                    |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |      |                                           |           |              |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                   | lcs-15569 |         | SampType: LCS            |             |      | TestCode: Method 8260B/5035LOW: VOLATILES |           |              |          |      |
| Client ID:                  | LCSS      |         | Batch ID: 15569          |             |      | RunNo: 21530                              |           |              |          |      |
| Prep Date:                  | 9/29/2014 |         | Analysis Date: 9/29/2014 |             |      | SeqNo: 629915                             |           | Units: mg/Kg |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.00922   | 0.00200 | 0.01000                  | 0           | 92.2 | 70                                        | 130       |              |          |      |
| Trichloroethene (TCE)       | 0.00959   | 0.00200 | 0.01000                  | 0           | 95.9 | 61.6                                      | 131       |              |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0218    |         | 0.02000                  |             | 109  | 70                                        | 130       |              |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0224    |         | 0.02000                  |             | 112  | 65.3                                      | 135       |              |          |      |
| Surr: Dibromofluoromethane  | 0.0205    |         | 0.02000                  |             | 103  | 70                                        | 130       |              |          |      |
| Surr: Toluene-d8            | 0.0202    |         | 0.02000                  |             | 101  | 70                                        | 130       |              |          |      |

### Qualifiers:

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15576  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15576          |             | RunNo: 21591                              |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |      | Analysis Date: 10/1/2014 |             | SeqNo: 632834                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |                                           |          |              |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15576  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 15576     | RunNo:      | 21591                           |          |           |      |          |      |
| Prep Date:                 | 9/29/2014 | Analysis Date: | 10/1/2014 | SeqNo:      | 632834                          | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 2.3       |                | 3.330     |             | 68.5                            | 21       | 111       |      |          |      |
| Surr: Phenol-d5            | 2.3       |                | 3.330     |             | 69.7                            | 23.1     | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.8       |                | 3.330     |             | 55.4                            | 22.7     | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |                | 1.670     |             | 75.1                            | 24.5     | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.2       |                | 1.670     |             | 70.9                            | 21.2     | 129       |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |                | 1.670     |             | 76.0                            | 39.4     | 107       |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | lcs-15576 |      | SampType: LCS            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15576          |             |      | RunNo: 21591                              |           |              |          |      |
| Prep Date:                 | 9/29/2014 |      | Analysis Date: 10/1/2014 |             |      | SeqNo: 632836                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Acenaphthene               | 1.3       | 0.20 | 1.670                    | 0           | 76.1 | 50.7                                      | 110       |              |          |      |
| 4-Chloro-3-methylphenol    | 3.0       | 0.50 | 3.330                    | 0           | 91.1 | 47.8                                      | 107       |              |          |      |
| 2-Chlorophenol             | 2.6       | 0.20 | 3.330                    | 0           | 79.2 | 45.7                                      | 108       |              |          |      |
| 1,4-Dichlorobenzene        | 1.1       | 0.20 | 1.670                    | 0           | 65.7 | 46.1                                      | 112       |              |          |      |
| 2,4-Dinitrotoluene         | 1.2       | 0.50 | 1.670                    | 0           | 73.5 | 44.9                                      | 114       |              |          |      |
| N-Nitrosodi-n-propylamine  | 1.0       | 0.20 | 1.670                    | 0           | 61.7 | 38.7                                      | 128       |              |          |      |
| 4-Nitrophenol              | 2.6       | 0.25 | 3.330                    | 0           | 78.3 | 40.2                                      | 103       |              |          |      |
| Pentachlorophenol          | 1.3       | 0.40 | 3.330                    | 0           | 39.8 | 32.9                                      | 94        |              |          |      |
| Phenol                     | 2.7       | 0.20 | 3.330                    | 0           | 81.0 | 44.1                                      | 109       |              |          |      |
| Pyrene                     | 1.3       | 0.20 | 1.670                    | 0           | 80.6 | 51.9                                      | 109       |              |          |      |
| 1,2,4-Trichlorobenzene     | 1.2       | 0.20 | 1.670                    | 0           | 74.2 | 49.5                                      | 115       |              |          |      |
| Surr: 2-Fluorophenol       | 2.3       |      | 3.330                    |             | 68.4 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.5       |      | 3.330                    |             | 74.0 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.4       |      | 3.330                    |             | 72.5 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.4       |      | 1.670                    |             | 82.1 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 78.1 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.5       |      | 1.670                    |             | 87.4 | 39.4                                      | 107       |              |          |      |

### Qualifiers:

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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | MB-15805  |       | SampType: MBLK           |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | PBS       |       | Batch ID: 15805          |             | RunNo: 21806                       |          |              |      |          |      |
| Prep Date: | 10/8/2014 |       | Analysis Date: 10/9/2014 |             | SeqNo: 640877                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercurv    | ND        | 0.031 |                          |             |                                    |          |              |      |          |      |

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | LCS-15805 |       | SampType: LCS            |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | LCSS      |       | Batch ID: 15805          |             | RunNo: 21806                       |          |              |      |          |      |
| Prep Date: | 10/8/2014 |       | Analysis Date: 10/9/2014 |             | SeqNo: 641056                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercury    | 0.17      | 0.033 | 0.1667                   | 0           | 102                                | 80       | 120          |      |          |      |

### Qualifiers:

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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>MB-15684</b>  |      | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>PBS</b>       |      | Batch ID:      | <b>15684</b>     |      | RunNo:    | <b>21647</b>                         |      |                     |      |
| Prep Date: | <b>10/2/2014</b> |      | Analysis Date: | <b>10/3/2014</b> |      | SeqNo:    | <b>635290</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Arsenic    | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Barium     | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Beryllium  | ND               | 0.15 |                |                  |      |           |                                      |      |                     |      |
| Cadmium    | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Chromium   | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Cobalt     | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Lead       | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Nickel     | ND               | 0.50 |                |                  |      |           |                                      |      |                     |      |
| Selenium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Silver     | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Vanadium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Zinc       | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>LCS-15684</b> |      | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>LCSS</b>      |      | Batch ID:      | <b>15684</b>     |      | RunNo:    | <b>21647</b>                         |      |                     |      |
| Prep Date: | <b>10/2/2014</b> |      | Analysis Date: | <b>10/3/2014</b> |      | SeqNo:    | <b>635291</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | 26               | 2.5  | 25.00          | 0                | 103  | 80        | 120                                  |      |                     |      |
| Arsenic    | 25               | 2.5  | 25.00          | 0                | 100  | 80        | 120                                  |      |                     |      |
| Barium     | 26               | 0.10 | 25.00          | 0                | 103  | 80        | 120                                  |      |                     |      |
| Beryllium  | 26               | 0.15 | 25.00          | 0                | 104  | 80        | 120                                  |      |                     |      |
| Cadmium    | 25               | 0.10 | 25.00          | 0                | 99.3 | 80        | 120                                  |      |                     |      |
| Chromium   | 26               | 0.30 | 25.00          | 0                | 103  | 80        | 120                                  |      |                     |      |
| Cobalt     | 25               | 0.30 | 25.00          | 0                | 102  | 80        | 120                                  |      |                     |      |
| Lead       | 25               | 0.25 | 25.00          | 0                | 101  | 80        | 120                                  |      |                     |      |
| Nickel     | 26               | 0.50 | 25.00          | 0                | 104  | 80        | 120                                  |      |                     |      |
| Selenium   | 25               | 2.5  | 25.00          | 0                | 99.6 | 80        | 120                                  |      |                     |      |
| Silver     | 5.1              | 0.25 | 5.000          | 0                | 102  | 80        | 120                                  |      |                     |      |
| Vanadium   | 26               | 2.5  | 25.00          | 0                | 104  | 80        | 120                                  |      |                     |      |
| Zinc       | 25               | 2.5  | 25.00          | 0                | 98.9 | 80        | 120                                  |      |                     |      |

|            |                  |     |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|-----|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>MB-15704</b>  |     | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>PBS</b>       |     | Batch ID:      | <b>15704</b>     |      | RunNo:    | <b>21664</b>                         |      |                     |      |
| Prep Date: | <b>10/3/2014</b> |     | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635633</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | ND               | 2.5 |                |                  |      |           |                                      |      |                     |      |
| Arsenic    | ND               | 2.5 |                |                  |      |           |                                      |      |                     |      |

### Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E43

29-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |                |           |           |                               |        |       |  |  |  |
|------------|-----------|----------------|-----------|-----------|-------------------------------|--------|-------|--|--|--|
| Sample ID  | MB-15704  | SampType:      | MBLK      | TestCode: | EPA Method 6010B: Soil Metals |        |       |  |  |  |
| Client ID: | PBS       | Batch ID:      | 15704     | RunNo:    | 21664                         |        |       |  |  |  |
| Prep Date: | 10/3/2014 | Analysis Date: | 10/4/2014 | SeqNo:    | 635633                        | Units: | mg/Kg |  |  |  |

| Analyte   | Result | PQL  | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|------|-----------|-------------|------|----------|-----------|------|----------|------|
| Barium    | ND     | 0.10 |           |             |      |          |           |      |          |      |
| Beryllium | ND     | 0.15 |           |             |      |          |           |      |          |      |
| Cadmium   | ND     | 0.10 |           |             |      |          |           |      |          |      |
| Chromium  | ND     | 0.30 |           |             |      |          |           |      |          |      |
| Cobalt    | ND     | 0.30 |           |             |      |          |           |      |          |      |
| Lead      | ND     | 0.25 |           |             |      |          |           |      |          |      |
| Nickel    | ND     | 0.50 |           |             |      |          |           |      |          |      |
| Selenium  | ND     | 2.5  |           |             |      |          |           |      |          |      |
| Silver    | ND     | 0.25 |           |             |      |          |           |      |          |      |
| Vanadium  | ND     | 2.5  |           |             |      |          |           |      |          |      |
| Zinc      | ND     | 2.5  |           |             |      |          |           |      |          |      |

|            |           |                |           |           |                               |        |       |  |  |  |
|------------|-----------|----------------|-----------|-----------|-------------------------------|--------|-------|--|--|--|
| Sample ID  | LCS-15704 | SampType:      | LCS       | TestCode: | EPA Method 6010B: Soil Metals |        |       |  |  |  |
| Client ID: | LCSS      | Batch ID:      | 15704     | RunNo:    | 21664                         |        |       |  |  |  |
| Prep Date: | 10/3/2014 | Analysis Date: | 10/4/2014 | SeqNo:    | 635634                        | Units: | mg/Kg |  |  |  |

| Analyte   | Result | PQL  | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|------|-----------|-------------|------|----------|-----------|------|----------|------|
| Antimony  | 24     | 2.5  | 25.00     | 0           | 97.6 | 80       | 120       |      |          |      |
| Arsenic   | 25     | 2.5  | 25.00     | 0           | 100  | 80       | 120       |      |          |      |
| Barium    | 24     | 0.10 | 25.00     | 0           | 96.7 | 80       | 120       |      |          |      |
| Beryllium | 26     | 0.15 | 25.00     | 0           | 103  | 80       | 120       |      |          |      |
| Cadmium   | 24     | 0.10 | 25.00     | 0           | 96.8 | 80       | 120       |      |          |      |
| Chromium  | 24     | 0.30 | 25.00     | 0           | 96.5 | 80       | 120       |      |          |      |
| Cobalt    | 23     | 0.30 | 25.00     | 0           | 93.9 | 80       | 120       |      |          |      |
| Lead      | 24     | 0.25 | 25.00     | 0           | 94.3 | 80       | 120       |      |          |      |
| Nickel    | 23     | 0.50 | 25.00     | 0           | 93.6 | 80       | 120       |      |          |      |
| Selenium  | 24     | 2.5  | 25.00     | 0           | 94.1 | 80       | 120       |      |          |      |
| Silver    | 5.0    | 0.25 | 5.000     | 0           | 99.8 | 80       | 120       |      |          |      |
| Vanadium  | 25     | 2.5  | 25.00     | 0           | 102  | 80       | 120       |      |          |      |
| Zinc      | 24     | 2.5  | 25.00     | 0           | 95.7 | 80       | 120       |      |          |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
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- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Sample Log-In Check List

Client Name: **Western Refining Southw**

Work Order Number: **1409E43**

RcptNo: **1**

Received by/date:

Logged By: **Ashley Gallegos**

9/27/2014 5:45:00 AM

Completed By: **Ashley Gallegos**

9/27/2014 2:56:43 PM

Reviewed By:

**CS**

**09/29/14**

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.1                     | Good      | Yes         |         |           |           |

# Chain-of-Custody Record

Client: **WESTERN REFINING SW, INC.**  
**BLOOMFIELD TERMINAL**  
 Mailing Address: **#50 Co. Rd 4990**  
**BLOOMFIELD, NM 87413**  
 Phone #: **505-632-4166**  
 Email or Fax #: **KELLY.ROBINSON@WNR.COM**

QA/QC Package:  
☒ Standard  
☐ NELAP  
☐ Other  
☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush  
 Project Name:

**GROUP 9**  
 Project #:

Project Manager:

**KELLY ROBINSON**  
 Sampler: **TRACY PAYNE**

On Ice: ☒ Yes ☐ No

Sample Temperature: **2.1**

Container Type and #  
 Preservative Type  
 HEAL No.  
**1409 E43**

| Date  | Time | Matrix | Sample Request ID  | Container Type and # | Preservative Type | HEAL No. | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> ) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | Metals - SEE ATTACHED | SHEET | Air Bubbles (Y or N) |
|-------|------|--------|--------------------|----------------------|-------------------|----------|----------------------------|------------------------------|-----------------------------|--------------------|--------------------|---------------------------|---------------|----------------------------------------------------------------------------------------|------------------------------|-------------|-----------------|-----------------------|-------|----------------------|
| 25.14 | 1015 | SOIL   | SWMU 13-4 (0.5-2') | 2V                   | SOB1              | -001     |                            |                              |                             |                    |                    |                           |               |                                                                                        |                              |             |                 |                       |       |                      |
|       |      |        |                    | 2V                   | METHANOL          |          |                            |                              |                             |                    |                    |                           |               |                                                                                        |                              |             |                 |                       |       |                      |
|       |      |        |                    | 2J                   | -                 |          |                            |                              |                             |                    |                    |                           |               |                                                                                        |                              |             |                 |                       |       |                      |
| 1025  |      |        | SWMU 13-4 (6-8')   | 2V                   | SOB1              | -002     |                            |                              |                             |                    |                    |                           |               |                                                                                        |                              |             |                 |                       |       |                      |
|       |      |        |                    | 2V                   | METHANOL          |          |                            |                              |                             |                    |                    |                           |               |                                                                                        |                              |             |                 |                       |       |                      |
|       |      |        |                    | 2J                   | -                 |          |                            |                              |                             |                    |                    |                           |               |                                                                                        |                              |             |                 |                       |       |                      |
| 1115  |      |        | SWMU 13-4 (24-26') | 2V                   | SOB1              | -003     |                            |                              |                             |                    |                    |                           |               |                                                                                        |                              |             |                 |                       |       |                      |
|       |      |        |                    | 2V                   | METHANOL          |          |                            |                              |                             |                    |                    |                           |               |                                                                                        |                              |             |                 |                       |       |                      |
|       |      |        |                    | 2J                   | -                 |          |                            |                              |                             |                    |                    |                           |               |                                                                                        |                              |             |                 |                       |       |                      |

Remarks:

Received by: **Martin Waelen** Date: **9/26/14** Time: **1420**  
 Received by: **Martin Waelen** Date: **09/27/14** Time: **0545**

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.





# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                   | Analytical Method                  |
|---------------------------|------------------------------------|
| Antimony                  | SW-846 method 6010/6020            |
| Arsenic                   | SW-846 method 6010/6020            |
| Barium                    | SW-846 method 6010/6020            |
| Beryllium                 | SW-846 method 6010/6020            |
| Cadmium                   | SW-846 method 6010/6020            |
| Chromium                  | SW-846 method 6010/6020            |
| <del>Chromium VI</del>    | <del>SW-846 method 6010/6020</del> |
| Cobalt                    | SW-846 method 6010/6020            |
| Cyanide                   | SW-846 method 335.4/335.2 mod      |
| Lead                      | SW-846 method 6010/6020            |
| <del>Tetraethyllead</del> | <del>SW-846 method 6010/6020</del> |
| Mercury                   | SW-846 method 7470/7471            |
| Nickel                    | SW-846 method 6010/6020            |
| Selenium                  | SW-846 method 6010/6020            |
| Silver                    | SW-846 method 6010/6020            |
| Vanadium                  | SW-846 method 6010/6020            |
| Zinc                      | SW-846 method 6010/6020            |



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 22, 2014

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409E44

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

## Case Narrative

WO#: 1409E44  
Date: 10/22/2014

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**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

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Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 10:40:00 AM

**Lab ID:** 1409E44-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units                | DF | Date Analyzed         | Batch  |
|------------------------------------------------|--------|----------|------|----------------------|----|-----------------------|--------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      | Analyst: <b>BCN</b>  |    |                       |        |
| Diesel Range Organics (DRO)                    | 46     | 11       |      | mg/Kg-dry            | 1  | 10/1/2014 4:38:03 PM  | 15574  |
| Motor Oil Range Organics (MRO)                 | 100    | 54       |      | mg/Kg-dry            | 1  | 10/1/2014 4:38:03 PM  | 15574  |
| Surr: DNOP                                     | 102    | 57.9-140 |      | %REC                 | 1  | 10/1/2014 4:38:03 PM  | 15574  |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      | Analyst: <b>NSB</b>  |    |                       |        |
| Gasoline Range Organics (GRO)                  | ND     | 3.2      |      | mg/Kg-dry            | 1  | 10/2/2014 7:30:12 PM  | R21610 |
| Surr: BFB                                      | 84.6   | 80-120   |      | %REC                 | 1  | 10/2/2014 7:30:12 PM  | R21610 |
| <b>PERCENT MOISTURE</b>                        |        |          |      | Analyst: <b>cadg</b> |    |                       |        |
| Percent Moisture                               | 9.3    | 1.0      |      | wt%                  | 1  | 9/29/2014 12:06:00 PM | R21525 |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      | Analyst: <b>MMD</b>  |    |                       |        |
| Mercury                                        | ND     | 0.035    |      | mg/Kg-dry            | 1  | 10/9/2014 1:34:31 PM  | 15805  |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      | Analyst: <b>ELS</b>  |    |                       |        |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Arsenic                                        | 3.1    | 2.7      |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Barium                                         | 160    | 0.11     |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Beryllium                                      | 0.39   | 0.16     |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Chromium                                       | 8.0    | 0.33     |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Cobalt                                         | 4.4    | 0.33     |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Lead                                           | 13     | 0.27     |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Nickel                                         | 7.8    | 0.54     |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Vanadium                                       | 22     | 2.7      |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| Zinc                                           | 29     | 2.7      |      | mg/Kg-dry            | 1  | 10/3/2014 1:09:31 PM  | 15684  |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      | Analyst: <b>JDC</b>  |    |                       |        |
| Acenaphthene                                   | ND     | 0.44     |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |
| Acenaphthylene                                 | ND     | 0.44     |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |
| Aniline                                        | ND     | 0.44     |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |
| Anthracene                                     | ND     | 0.44     |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |
| Azobenzene                                     | ND     | 0.44     |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |
| Benz(a)anthracene                              | ND     | 0.44     |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |
| Benzo(a)pyrene                                 | ND     | 0.44     |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |
| Benzo(b)fluoranthene                           | ND     | 0.44     |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |
| Benzo(g,h,i)perylene                           | ND     | 0.44     |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |
| Benzo(k)fluoranthene                           | ND     | 0.44     |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |
| Benzyl alcohol                                 | ND     | 0.44     |      | mg/Kg-dry            | 1  | 10/2/2014 8:36:53 PM  | 15576  |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 10:40:00 AM

**Lab ID:** 1409E44-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Carbazole                              | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Chrysene                               | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.88 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Dibenzofuran                           | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.88 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.66 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Fluoranthene                           | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Fluorene                               | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Hexachloroethane                       | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 3 of 26 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 10:40:00 AM

**Lab ID:** 1409E44-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| 3+4-Methylphenol                       | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| N-Nitrosodi-n-propylamine              | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| N-Nitrosodiphenylamine                 | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Naphthalene                            | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| 2-Nitroaniline                         | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| 3-Nitroaniline                         | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| 4-Nitroaniline                         | ND     | 0.88      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Nitrobenzene                           | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| 2-Nitrophenol                          | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| 4-Nitrophenol                          | ND     | 0.55      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Pentachlorophenol                      | ND     | 0.88      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Phenanthrene                           | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Phenol                                 | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Pyrene                                 | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Pyridine                               | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| 2,4,5-Trichlorophenol                  | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| 2,4,6-Trichlorophenol                  | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Surr: 2-Fluorophenol                   | 60.2   | 21-111    |      | %REC      | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Surr: Phenol-d5                        | 61.9   | 23.1-117  |      | %REC      | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Surr: 2,4,6-Tribromophenol             | 53.4   | 22.7-88.9 |      | %REC      | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Surr: Nitrobenzene-d5                  | 64.8   | 24.5-126  |      | %REC      | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Surr: 2-Fluorobiphenyl                 | 64.6   | 21.2-129  |      | %REC      | 1  | 10/2/2014 8:36:53 PM | 15576         |
| Surr: 4-Terphenyl-d14                  | 71.6   | 39.4-107  |      | %REC      | 1  | 10/2/2014 8:36:53 PM | 15576         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | ND     | 0.00191   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| Toluene                                | ND     | 0.00191   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| Ethylbenzene                           | ND     | 0.00191   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| Xylenes, Total                         | ND     | 0.00191   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00191   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00191   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00191   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00191   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00191   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| Naphthalene                            | ND     | 0.00191   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| 1-Methylnaphthalene                    | ND     | 0.00383   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| 2-Methylnaphthalene                    | ND     | 0.00383   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |
| Acetone                                | 0.0279 | 0.00957   |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 10:40:00 AM

**Lab ID:** 1409E44-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: <b>cadg</b> |
| Bromobenzene                           | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Bromodichloromethane                   | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Bromoform                              | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Bromomethane                           | ND     | 0.00287 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 2-Butanone                             | ND     | 0.00957 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Carbon tetrachloride                   | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Chlorobenzene                          | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Chloroethane                           | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Chloroform                             | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Chloromethane                          | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 2-Chlorotoluene                        | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Carbon disulfide                       | ND     | 0.00957 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 4-Chlorotoluene                        | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| cis-1,2-DCE                            | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| cis-1,3-Dichloropropene                | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Dibromochloromethane                   | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Dibromomethane                         | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,2-Dichlorobenzene                    | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,3-Dichlorobenzene                    | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,4-Dichlorobenzene                    | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Dichlorodifluoromethane                | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,1-Dichloroethane                     | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,1-Dichloroethene                     | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,2-Dichloropropane                    | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,3-Dichloropropane                    | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 2,2-Dichloropropane                    | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,1-Dichloropropene                    | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Hexachlorobutadiene                    | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Isopropylbenzene                       | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 4-Isopropyltoluene                     | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Methylene chloride                     | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| n-Butylbenzene                         | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 2-Hexanone                             | ND     | 0.00957 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| n-Propylbenzene                        | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| sec-Butylbenzene                       | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Styrene                                | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 4-Methyl-2-pentanone                   | ND     | 0.00957 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| tert-Butylbenzene                      | ND     | 0.00191 |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 5 of 26 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 10:40:00 AM

**Lab ID:** 1409E44-001

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Tetrachloroethene (PCE)                | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| trans-1,2-DCE                          | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| trans-1,3-Dichloropropene              | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,1,1-Trichloroethane                  | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,1,2-Trichloroethane                  | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Trichloroethene (TCE)                  | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Trichlorofluoromethane                 | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| 1,2,3-Trichloropropane                 | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Vinyl chloride                         | ND     | 0.00191  |      | mg/Kg-dry | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Surr: 1,2-Dichloroethane-d4            | 111    | 70-130   |      | %REC      | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Surr: 4-Bromofluorobenzene             | 101    | 65.3-135 |      | %REC      | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Surr: Dibromofluoromethane             | 101    | 70-130   |      | %REC      | 1  | 9/29/2014 5:30:02 PM | 15569                |
| Surr: Toluene-d8                       | 98.5   | 70-130   |      | %REC      | 1  | 9/29/2014 5:30:02 PM | 15569                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 26 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (4-6')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 10:50:00 AM

**Lab ID:** 1409E44-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 200    | 11       |      | mg/Kg-dry | 1  | 10/1/2014 4:59:32 PM  | 15574                |
| Motor Oil Range Organics (MRO)                 | 410    | 55       |      | mg/Kg-dry | 1  | 10/1/2014 4:59:32 PM  | 15574                |
| Surr: DNOP                                     | 92.2   | 57.9-140 |      | %REC      | 1  | 10/1/2014 4:59:32 PM  | 15574                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 14     | 4.3      |      | mg/Kg-dry | 1  | 10/3/2014 12:00:43 AM | R21610               |
| Surr: BFB                                      | 142    | 80-120   | S    | %REC      | 1  | 10/3/2014 12:00:43 AM | R21610               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 11     | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 10/9/2014 1:36:14 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Arsenic                                        | 3.1    | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Barium                                         | 170    | 0.11     |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Beryllium                                      | 0.54   | 0.17     |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Chromium                                       | 7.2    | 0.33     |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Cobalt                                         | 4.6    | 0.33     |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Lead                                           | 13     | 0.28     |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Nickel                                         | 7.0    | 0.56     |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Vanadium                                       | 25     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| Zinc                                           | 30     | 2.8      |      | mg/Kg-dry | 1  | 10/3/2014 1:10:46 PM  | 15684                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |
| Aniline                                        | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |
| Anthracene                                     | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |
| Azobenzene                                     | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM  | 15576                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (4-6')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 10:50:00 AM

**Lab ID:** 1409E44-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Carbazole                              | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Chrysene                               | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.90 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Dibenzofuran                           | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.90 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.67 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Fluoranthene                           | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Fluorene                               | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Hexachloroethane                       | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (4-6')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 10:50:00 AM

**Lab ID:** 1409E44-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| 3+4-Methylphenol                       | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| N-Nitrosodi-n-propylamine              | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| N-Nitrosodiphenylamine                 | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Naphthalene                            | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| 2-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| 3-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| 4-Nitroaniline                         | ND     | 0.90      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Nitrobenzene                           | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| 2-Nitrophenol                          | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| 4-Nitrophenol                          | ND     | 0.56      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Pentachlorophenol                      | ND     | 0.90      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Phenanthrene                           | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Phenol                                 | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Pyrene                                 | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Pyridine                               | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| 2,4,5-Trichlorophenol                  | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| 2,4,6-Trichlorophenol                  | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Surr: 2-Fluorophenol                   | 70.7   | 21-111    |      | %REC      | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Surr: Phenol-d5                        | 68.8   | 23.1-117  |      | %REC      | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Surr: 2,4,6-Tribromophenol             | 57.1   | 22.7-88.9 |      | %REC      | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Surr: Nitrobenzene-d5                  | 68.5   | 24.5-126  |      | %REC      | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Surr: 2-Fluorobiphenyl                 | 67.1   | 21.2-129  |      | %REC      | 1  | 10/2/2014 9:04:47 PM | 15576         |
| Surr: 4-Terphenyl-d14                  | 70.5   | 39.4-107  |      | %REC      | 1  | 10/2/2014 9:04:47 PM | 15576         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | ND     | 0.00214   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Toluene                                | ND     | 0.00214   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Ethylbenzene                           | ND     | 0.00214   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Xylenes, Total                         | ND     | 0.00214   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00214   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00214   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00214   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00214   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00214   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Naphthalene                            | ND     | 0.00214   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1-Methylnaphthalene                    | ND     | 0.00427   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 2-Methylnaphthalene                    | ND     | 0.00427   |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Acetone                                | 0.0553 | 0.0107    |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 9 of 26 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E44

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 12-1 (4-6')

Project: GROUP 9

Collection Date: 9/24/2014 10:50:00 AM

Lab ID: 1409E44-002

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Bromodichloromethane                   | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Bromoform                              | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Bromomethane                           | ND     | 0.00320 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 2-Butanone                             | ND     | 0.0107  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Carbon tetrachloride                   | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Chlorobenzene                          | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Chloroethane                           | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Chloroform                             | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Chloromethane                          | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 2-Chlorotoluene                        | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Carbon disulfide                       | ND     | 0.0107  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 4-Chlorotoluene                        | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| cis-1,2-DCE                            | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| cis-1,3-Dichloropropene                | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Dibromochloromethane                   | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Dibromomethane                         | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,2-Dichlorobenzene                    | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,3-Dichlorobenzene                    | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,4-Dichlorobenzene                    | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Dichlorodifluoromethane                | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,1-Dichloroethane                     | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,1-Dichloroethene                     | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,2-Dichloropropane                    | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,3-Dichloropropane                    | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 2,2-Dichloropropane                    | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 1,1-Dichloropropene                    | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Hexachlorobutadiene                    | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Isopropylbenzene                       | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 4-Isopropyltoluene                     | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Methylene chloride                     | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| n-Butylbenzene                         | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 2-Hexanone                             | ND     | 0.0107  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| n-Propylbenzene                        | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| sec-Butylbenzene                       | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| Styrene                                | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| 4-Methyl-2-pentanone                   | ND     | 0.0107  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |
| tert-Butylbenzene                      | ND     | 0.00214 |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (4-6')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 10:50:00 AM

**Lab ID:** 1409E44-002

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| Tetrachloroethene (PCE)                | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| trans-1,2-DCE                          | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| trans-1,3-Dichloropropene              | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| 1,1,1-Trichloroethane                  | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| 1,1,2-Trichloroethane                  | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| Trichloroethene (TCE)                  | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| Trichlorofluoromethane                 | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| 1,2,3-Trichloropropane                 | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| Vinyl chloride                         | ND     | 0.00214  |      | mg/Kg-dry | 1  | 9/29/2014 5:58:44 PM | 15569                |
| Surr: 1,2-Dichloroethane-d4            | 98.3   | 70-130   |      | %REC      | 1  | 9/29/2014 5:58:44 PM | 15569                |
| Surr: 4-Bromofluorobenzene             | 110    | 65.3-135 |      | %REC      | 1  | 9/29/2014 5:58:44 PM | 15569                |
| Surr: Dibromofluoromethane             | 98.2   | 70-130   |      | %REC      | 1  | 9/29/2014 5:58:44 PM | 15569                |
| Surr: Toluene-d8                       | 106    | 70-130   |      | %REC      | 1  | 9/29/2014 5:58:44 PM | 15569                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 1:50:00 PM

**Lab ID:** 1409E44-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 34     | 10       |      | mg/Kg-dry | 1  | 9/30/2014 7:55:40 PM  | 15574                |
| Motor Oil Range Organics (MRO)                 | ND     | 51       |      | mg/Kg-dry | 1  | 9/30/2014 7:55:40 PM  | 15574                |
| Surr: DNOP                                     | 104    | 57.9-140 |      | %REC      | 1  | 9/30/2014 7:55:40 PM  | 15574                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.4      |      | mg/Kg-dry | 1  | 10/3/2014 12:30:48 AM | R21610               |
| Surr: BFB                                      | 87.2   | 80-120   |      | %REC      | 1  | 10/3/2014 12:30:48 AM | R21610               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 2.3    | 1.0      |      | wt%       | 1  | 9/29/2014 12:06:00 PM | R21525               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.032    |      | mg/Kg-dry | 1  | 10/9/2014 1:37:58 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Arsenic                                        | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Barium                                         | 250    | 0.10     |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Chromium                                       | 7.6    | 0.31     |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Cobalt                                         | 5.4    | 0.31     |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Lead                                           | 0.36   | 0.26     |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Nickel                                         | 3.6    | 0.51     |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Vanadium                                       | 22     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| Zinc                                           | 19     | 2.6      |      | mg/Kg-dry | 1  | 10/3/2014 1:12:00 PM  | 15684                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.20     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |
| Acenaphthylene                                 | ND     | 0.20     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |
| Aniline                                        | ND     | 0.20     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |
| Anthracene                                     | ND     | 0.20     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |
| Azobenzene                                     | ND     | 0.20     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |
| Benz(a)anthracene                              | ND     | 0.20     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |
| Benzo(a)pyrene                                 | ND     | 0.20     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |
| Benzo(b)fluoranthene                           | ND     | 0.20     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |
| Benzo(g,h,i)perylene                           | ND     | 0.20     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |
| Benzo(k)fluoranthene                           | ND     | 0.20     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |
| Benzoic acid                                   | ND     | 0.51     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |
| Benzyl alcohol                                 | ND     | 0.20     |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM  | 15576                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 1:50:00 PM

**Lab ID:** 1409E44-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Bis(2-chloroethyl)ether                | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.51 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 4-Bromophenyl phenyl ether             | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Butyl benzyl phthalate                 | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Carbazole                              | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 4-Chloro-3-methylphenol                | ND     | 0.51 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 4-Chloroaniline                        | ND     | 0.51 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 2-Chlorophenol                         | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Chrysene                               | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Di-n-butyl phthalate                   | ND     | 0.51 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Di-n-octyl phthalate                   | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Dibenz(a,h)anthracene                  | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Dibenzofuran                           | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 1,2-Dichlorobenzene                    | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 1,3-Dichlorobenzene                    | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 1,4-Dichlorobenzene                    | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Diethyl phthalate                      | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Dimethyl phthalate                     | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 2,4-Dichlorophenol                     | ND     | 0.41 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.51 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 2,4-Dinitrophenol                      | ND     | 0.51 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 2,4-Dinitrotoluene                     | ND     | 0.51 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 2,6-Dinitrotoluene                     | ND     | 0.51 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Fluoranthene                           | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Fluorene                               | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Hexachlorobenzene                      | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Hexachlorobutadiene                    | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Hexachlorocyclopentadiene              | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Hexachloroethane                       | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| Isophorone                             | ND     | 0.51 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 1-Methylnaphthalene                    | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |
| 2-Methylnaphthalene                    | ND     | 0.20 |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 1:50:00 PM

**Lab ID:** 1409E44-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 0.51      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| 3+4-Methylphenol                       | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| N-Nitrosodi-n-propylamine              | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| N-Nitrosodiphenylamine                 | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Naphthalene                            | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| 2-Nitroaniline                         | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| 3-Nitroaniline                         | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| 4-Nitroaniline                         | ND      | 0.41      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Nitrobenzene                           | ND      | 0.51      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| 2-Nitrophenol                          | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| 4-Nitrophenol                          | ND      | 0.26      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Pentachlorophenol                      | ND      | 0.41      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Phenanthrene                           | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Phenol                                 | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Pyrene                                 | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Pyridine                               | ND      | 0.51      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| 2,4,5-Trichlorophenol                  | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| 2,4,6-Trichlorophenol                  | ND      | 0.20      |      | mg/Kg-dry | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Surr: 2-Fluorophenol                   | 92.8    | 21-111    |      | %REC      | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Surr: Phenol-d5                        | 95.2    | 23.1-117  |      | %REC      | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Surr: 2,4,6-Tribromophenol             | 88.1    | 22.7-88.9 |      | %REC      | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Surr: Nitrobenzene-d5                  | 96.0    | 24.5-126  |      | %REC      | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Surr: 2-Fluorobiphenyl                 | 89.5    | 21.2-129  |      | %REC      | 1  | 10/2/2014 9:32:31 PM | 15576         |
| Surr: 4-Terphenyl-d14                  | 94.8    | 39.4-107  |      | %REC      | 1  | 10/2/2014 9:32:31 PM | 15576         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | 0.00590 | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Toluene                                | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Ethylbenzene                           | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Xylenes, Total                         | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,2,4-Trimethylbenzene                 | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Naphthalene                            | ND      | 0.00195   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1-Methylnaphthalene                    | 0.00623 | 0.00390   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 2-Methylnaphthalene                    | 0.00734 | 0.00390   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Acetone                                | 0.0124  | 0.00976   |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409E44

Date Reported: 10/22/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 12-1 (24-26')

Project: GROUP 9

Collection Date: 9/24/2014 1:50:00 PM

Lab ID: 1409E44-003

Matrix: SOIL

Received Date: 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Bromodichloromethane                   | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Bromoform                              | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Bromomethane                           | ND     | 0.00293 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 2-Butanone                             | ND     | 0.00976 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Carbon tetrachloride                   | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Chlorobenzene                          | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Chloroethane                           | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Chloroform                             | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Chloromethane                          | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 2-Chlorotoluene                        | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Carbon disulfide                       | 0.0118 | 0.00976 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 4-Chlorotoluene                        | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| cis-1,2-DCE                            | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| cis-1,3-Dichloropropene                | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Dibromochloromethane                   | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Dibromomethane                         | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,2-Dichlorobenzene                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,3-Dichlorobenzene                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,4-Dichlorobenzene                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Dichlorodifluoromethane                | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,1-Dichloroethane                     | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,1-Dichloroethene                     | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,2-Dichloropropane                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,3-Dichloropropane                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 2,2-Dichloropropane                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 1,1-Dichloropropene                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Hexachlorobutadiene                    | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Isopropylbenzene                       | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 4-Isopropyltoluene                     | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Methylene chloride                     | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| n-Butylbenzene                         | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 2-Hexanone                             | ND     | 0.00976 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| n-Propylbenzene                        | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| sec-Butylbenzene                       | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| Styrene                                | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| 4-Methyl-2-pentanone                   | ND     | 0.00976 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |
| tert-Butylbenzene                      | ND     | 0.00195 |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409E44**

Date Reported: **10/22/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 12-1 (24-26')

**Project:** GROUP 9

**Collection Date:** 9/24/2014 1:50:00 PM

**Lab ID:** 1409E44-003

**Matrix:** SOIL

**Received Date:** 9/27/2014 5:45:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| Tetrachloroethene (PCE)                | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| trans-1,2-DCE                          | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| trans-1,3-Dichloropropene              | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| 1,1,1-Trichloroethane                  | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| 1,1,2-Trichloroethane                  | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| Trichloroethene (TCE)                  | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| Trichlorofluoromethane                 | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| 1,2,3-Trichloropropane                 | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| Vinyl chloride                         | ND     | 0.00195  |      | mg/Kg-dry | 1  | 9/29/2014 6:27:25 PM | 15569                |
| Surr: 1,2-Dichloroethane-d4            | 122    | 70-130   |      | %REC      | 1  | 9/29/2014 6:27:25 PM | 15569                |
| Surr: 4-Bromofluorobenzene             | 87.0   | 65.3-135 |      | %REC      | 1  | 9/29/2014 6:27:25 PM | 15569                |
| Surr: Dibromofluoromethane             | 107    | 70-130   |      | %REC      | 1  | 9/29/2014 6:27:25 PM | 15569                |
| Surr: Toluene-d8                       | 101    | 70-130   |      | %REC      | 1  | 9/29/2014 6:27:25 PM | 15569                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com  
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140930027  
**Project Name:** 1409E44

## Analytical Results Report

|                         |                                   |                        |           |                           |                    |
|-------------------------|-----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930027-001                     | <b>Sampling Date</b>   | 9/24/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E44-001C / SWMU 12-1 (0.5-2') |                        |           | <b>Sampling Time</b>      | 10:40 AM           |
| <b>Matrix</b>           | Soil                              | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                   |                        |           |                           |                    |

| Parameter | Result | Units   | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.25 | 10/6/2014     | CRW     | EPA 335.4 |           |
| %moisture | 8.7    | Percent |      | 10/1/2014     | KJS     | %moisture |           |

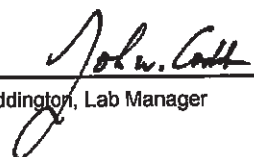
|                         |                                 |                        |           |                           |                    |
|-------------------------|---------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930027-002                   | <b>Sampling Date</b>   | 9/24/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E44-002C / SWMU 12-1 (4-6') |                        |           | <b>Sampling Time</b>      | 10:50 AM           |
| <b>Matrix</b>           | Soil                            | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                 |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.269 | 10/6/2014     | CRW     | EPA 335.4 |           |
| %moisture | 10.8   | Percent |       | 10/1/2014     | KJS     | %moisture |           |

|                         |                                   |                        |           |                           |                    |
|-------------------------|-----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140930027-003                     | <b>Sampling Date</b>   | 9/24/2014 | <b>Date/Time Received</b> | 9/30/2014 12:05 PM |
| <b>Client Sample ID</b> | 1409E44-003C / SWMU 12-1 (24-26') |                        |           | <b>Sampling Time</b>      | 1:50 PM            |
| <b>Matrix</b>           | Soil                              | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                   |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.254 | 10/6/2014     | CRW     | EPA 335.4 |           |
| %moisture | 10.7   | Percent |       | 10/1/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level  
ND Not Detected  
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.  
The results reported relate only to the samples indicated.  
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM:ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Thursday, October 16, 2014

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# Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140930027  
**Project Name:** 1409E44

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|---------|-----------|---------------|
| Cyanide   | 0.468      | mg/kg | 0.5       | 93.6 | 90-110  | 10/6/2014 | 10/6/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|-------|---------|-----------|---------------|
| 140930028-001 | Cyanide   | ND            | 12.8      | mg/kg | 12.5     | 102.4 | 90-110  | 10/6/2014 | 10/6/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 12.3       | mg/kg | 12.5      | 98.4 | 4.0  | 0-25    | 10/6/2014 | 10/6/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/6/2014 | 10/6/2014     |

AR Acceptable Range  
ND Not Detected  
PQL Practical Quantitation Limit  
RPD Relative Percentage Difference

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87693; ID:ID00013; MT:Cert0028; NM: ID00013; OR:ID200001-002; WA:C585  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Thursday, October 16, 2014

Page 1 of 1

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E44

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |                |           |             |           |                                         |           |        |          |      |
|--------------------------------|-----------|----------------|-----------|-------------|-----------|-----------------------------------------|-----------|--------|----------|------|
| Sample ID                      | MB-15574  | SampType:      | MBLK      |             | TestCode: | EPA Method 8015D: Diesel Range Organics |           |        |          |      |
| Client ID:                     | PBS       | Batch ID:      | 15574     |             | RunNo:    | 21538                                   |           |        |          |      |
| Prep Date:                     | 9/29/2014 | Analysis Date: | 9/30/2014 |             | SeqNo:    | 630642                                  |           | Units: | mg/Kg    |      |
| Analyte                        | Result    | PQL            | SPK value | SPK Ref Val | %REC      | LowLimit                                | HighLimit | %RPD   | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10             |           |             |           |                                         |           |        |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50             |           |             |           |                                         |           |        |          |      |
| Surr: DNOP                     | 11        |                | 10.00     |             | 105       | 57.9                                    | 140       |        |          |      |

|                             |           |     |                          |             |                                                   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15574 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 15574          |             | RunNo: 21538                                      |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |     | Analysis Date: 9/30/2014 |             | SeqNo: 630643                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 51        | 10  | 50.00                    | 0           | 101                                               | 68.6     | 130          |      |          |      |
| Surr: DNOP                  | 5.3       |     | 5.000                    |             | 106                                               | 57.9     | 140          |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E44

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                               |        |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|--------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 5ML RB |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | PBS    |     | Batch ID: R21610         |             | RunNo: 21610                               |          |              |      |          |      |
| Prep Date:                    |        |     | Analysis Date: 10/2/2014 |             | SeqNo: 634458                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND     | 5.0 |                          |             |                                            |          |              |      |          |      |
| Surr: BFB                     | 870    |     | 1000                     |             | 87.3                                       | 80       | 120          |      |          |      |

|                               |               |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|---------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS          |     | Batch ID: R21610         |             | RunNo: 21610                               |          |              |      |          |      |
| Prep Date:                    |               |     | Analysis Date: 10/2/2014 |             | SeqNo: 634459                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result        | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 22            | 5.0 | 25.00                    | 0           | 87.8                                       | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 970           |     | 1000                     |             | 97.1                                       | 80       | 120          |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E44

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |         |                          |             |                                           |          |              |      |          |      |
|--------------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15569  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                     | PBS       |         | Batch ID: 15569          |             | RunNo: 21530                              |          |              |      |          |      |
| Prep Date:                     | 9/29/2014 |         | Analysis Date: 9/29/2014 |             | SeqNo: 629909                             |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Toluene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Xylenes, Total                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| Acetone                        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromoform                      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromomethane                   | ND        | 0.00300 |                          |             |                                           |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroform                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloromethane                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E44

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |         |                |                  |      |           |                                        |      |                     |      |
|-----------------------------|------------------|---------|----------------|------------------|------|-----------|----------------------------------------|------|---------------------|------|
| Sample ID                   | <b>mb-15569</b>  |         | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>Method 8260B/5035LOW: VOLATILES</b> |      |                     |      |
| Client ID:                  | <b>PBS</b>       |         | Batch ID:      | <b>15569</b>     |      | RunNo:    | <b>21530</b>                           |      |                     |      |
| Prep Date:                  | <b>9/29/2014</b> |         | Analysis Date: | <b>9/29/2014</b> |      | SeqNo:    | <b>629909</b>                          |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL     | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                              | %RPD | RPDLimit            | Qual |
| 2,2-Dichloropropane         | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1-Dichloropropene         | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Isopropylbenzene            | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Methylene chloride          | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| n-Butylbenzene              | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 2-Hexanone                  | ND               | 0.0100  |                |                  |      |           |                                        |      |                     |      |
| n-Propylbenzene             | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| sec-Butylbenzene            | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Styrene                     | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.0100  |                |                  |      |           |                                        |      |                     |      |
| tert-Butylbenzene           | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| trans-1,2-DCE               | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Vinyl chloride              | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0201           |         | 0.02000        |                  | 100  | 70        | 130                                    |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.0230           |         | 0.02000        |                  | 115  | 65.3      | 135                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.0204           |         | 0.02000        |                  | 102  | 70        | 130                                    |      |                     |      |
| Surr: Toluene-d8            | 0.0202           |         | 0.02000        |                  | 101  | 70        | 130                                    |      |                     |      |

|               |                  |         |                |                  |      |           |                                        |      |                     |      |
|---------------|------------------|---------|----------------|------------------|------|-----------|----------------------------------------|------|---------------------|------|
| Sample ID     | <b>ics-15569</b> |         | SampType:      | <b>LCS</b>       |      | TestCode: | <b>Method 8260B/5035LOW: VOLATILES</b> |      |                     |      |
| Client ID:    | <b>LCSS</b>      |         | Batch ID:      | <b>15569</b>     |      | RunNo:    | <b>21530</b>                           |      |                     |      |
| Prep Date:    | <b>9/29/2014</b> |         | Analysis Date: | <b>9/29/2014</b> |      | SeqNo:    | <b>629915</b>                          |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL     | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                              | %RPD | RPDLimit            | Qual |
| Benzene       | 0.0100           | 0.00200 | 0.01000        | 0                | 100  | 70        | 130                                    |      |                     |      |
| Toluene       | 0.00993          | 0.00200 | 0.01000        | 0                | 99.3 | 70        | 130                                    |      |                     |      |
| Chlorobenzene | 0.0100           | 0.00200 | 0.01000        | 0                | 100  | 70        | 130                                    |      |                     |      |

### Qualifiers:

|   |                                                 |    |                                                    |
|---|-------------------------------------------------|----|----------------------------------------------------|
| * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
| E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
| O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
| R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
| S | Spike Recovery outside accepted recovery limits |    |                                                    |



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E44

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | lcs-15569 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | LCSS      |         | Batch ID: 15569          |             | RunNo: 21530                              |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |         | Analysis Date: 9/29/2014 |             | SeqNo: 629915                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.00922   | 0.00200 | 0.01000                  | 0           | 92.2                                      | 70       | 130          |      |          |      |
| Trichloroethene (TCE)       | 0.00959   | 0.00200 | 0.01000                  | 0           | 95.9                                      | 61.6     | 131          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0218    |         | 0.02000                  |             | 109                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0224    |         | 0.02000                  |             | 112                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0205    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0202    |         | 0.02000                  |             | 101                                       | 70       | 130          |      |          |      |

### Qualifiers:

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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E44

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15576  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15576          |             | RunNo: 21591                              |          |              |      |          |      |
| Prep Date:                  | 9/29/2014 |      | Analysis Date: 10/1/2014 |             | SeqNo: 632834                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |                                           |          |              |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

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O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E44

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15576  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 15576     | RunNo:      | 21591                           |          |           |      |          |      |
| Prep Date:                 | 9/29/2014 | Analysis Date: | 10/1/2014 | SeqNo:      | 632834                          | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 2.3       |                | 3.330     |             | 68.5                            | 21       | 111       |      |          |      |
| Surr: Phenol-d5            | 2.3       |                | 3.330     |             | 69.7                            | 23.1     | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.8       |                | 3.330     |             | 55.4                            | 22.7     | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5      | 1.3       |                | 1.670     |             | 75.1                            | 24.5     | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.2       |                | 1.670     |             | 70.9                            | 21.2     | 129       |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.3       |                | 1.670     |             | 76.0                            | 39.4     | 107       |      |          |      |

### Qualifiers:

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B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E44

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | lcs-15576 |      | SampType: LCS            |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15576          |             |      | RunNo: 21591                              |           |              |          |      |
| Prep Date:                 | 9/29/2014 |      | Analysis Date: 10/1/2014 |             |      | SeqNo: 632836                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| Acenaphthene               | 1.3       | 0.20 | 1.670                    | 0           | 76.1 | 50.7                                      | 110       |              |          |      |
| 4-Chloro-3-methylphenol    | 3.0       | 0.50 | 3.330                    | 0           | 91.1 | 47.8                                      | 107       |              |          |      |
| 2-Chlorophenol             | 2.6       | 0.20 | 3.330                    | 0           | 79.2 | 45.7                                      | 108       |              |          |      |
| 1,4-Dichlorobenzene        | 1.1       | 0.20 | 1.670                    | 0           | 65.7 | 46.1                                      | 112       |              |          |      |
| 2,4-Dinitrotoluene         | 1.2       | 0.50 | 1.670                    | 0           | 73.5 | 44.9                                      | 114       |              |          |      |
| N-Nitrosodi-n-propylamine  | 1.0       | 0.20 | 1.670                    | 0           | 61.7 | 38.7                                      | 128       |              |          |      |
| 4-Nitrophenol              | 2.6       | 0.25 | 3.330                    | 0           | 78.3 | 40.2                                      | 103       |              |          |      |
| Pentachlorophenol          | 1.3       | 0.40 | 3.330                    | 0           | 39.8 | 32.9                                      | 94        |              |          |      |
| Phenol                     | 2.7       | 0.20 | 3.330                    | 0           | 81.0 | 44.1                                      | 109       |              |          |      |
| Pyrene                     | 1.3       | 0.20 | 1.670                    | 0           | 80.6 | 51.9                                      | 109       |              |          |      |
| 1,2,4-Trichlorobenzene     | 1.2       | 0.20 | 1.670                    | 0           | 74.2 | 49.5                                      | 115       |              |          |      |
| Surr: 2-Fluorophenol       | 2.3       |      | 3.330                    |             | 68.4 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.5       |      | 3.330                    |             | 74.0 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.4       |      | 3.330                    |             | 72.5 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.4       |      | 1.670                    |             | 82.1 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 78.1 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.5       |      | 1.670                    |             | 87.4 | 39.4                                      | 107       |              |          |      |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E44

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |       |                |             |      |           |                          |      |              |      |  |
|------------|-----------|-------|----------------|-------------|------|-----------|--------------------------|------|--------------|------|--|
| Sample ID  | MB-15805  |       | SampType:      | MBLK        |      | TestCode: | EPA Method 7471: Mercury |      |              |      |  |
| Client ID: | PBS       |       | Batch ID:      | 15805       |      | RunNo:    | 21806                    |      |              |      |  |
| Prep Date: | 10/8/2014 |       | Analysis Date: | 10/9/2014   |      | SeqNo:    | 640877                   |      | Units: mg/Kg |      |  |
| Analyte    | Result    | PQL   | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                | %RPD | RPDLimit     | Qual |  |
| Mercury    | ND        | 0.031 |                |             |      |           |                          |      |              |      |  |

|            |           |       |           |                |           |          |           |                          |          |        |       |
|------------|-----------|-------|-----------|----------------|-----------|----------|-----------|--------------------------|----------|--------|-------|
| Sample ID  | LCS-15805 |       |           | SampType:      | LCS       |          | TestCode: | EPA Method 7471: Mercury |          |        |       |
| Client ID: | LCSS      |       |           | Batch ID:      | 15805     |          | RunNo:    | 21806                    |          |        |       |
| Prep Date: | 10/8/2014 |       |           | Analysis Date: | 10/9/2014 |          | SeqNo:    | 641056                   |          | Units: | mg/Kg |
| Analyte    | Result    | PQL   | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD                     | RPDLimit | Qual   |       |
| Mercury    | 0.17      | 0.033 | 0.1667    | 0              | 102       | 80       | 120       |                          |          |        |       |

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409E44

22-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |                          |           |             |                                         |          |              |      |          |      |
|------------|-----------|--------------------------|-----------|-------------|-----------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | MB-15684  | SampType: MBLK           |           |             | TestCode: EPA Method 6010B: Soil Metals |          |              |      |          |      |
| Client ID: | PBS       | Batch ID: 15684          |           |             | RunNo: 21647                            |          |              |      |          |      |
| Prep Date: | 10/2/2014 | Analysis Date: 10/3/2014 |           |             | SeqNo: 635290                           |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL                      | SPK value | SPK Ref Val | %REC                                    | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Antimony   | ND        | 2.5                      |           |             |                                         |          |              |      |          |      |
| Arsenic    | ND        | 2.5                      |           |             |                                         |          |              |      |          |      |
| Barium     | ND        | 0.10                     |           |             |                                         |          |              |      |          |      |
| Beryllium  | ND        | 0.15                     |           |             |                                         |          |              |      |          |      |
| Cadmium    | ND        | 0.10                     |           |             |                                         |          |              |      |          |      |
| Chromium   | ND        | 0.30                     |           |             |                                         |          |              |      |          |      |
| Cobalt     | ND        | 0.30                     |           |             |                                         |          |              |      |          |      |
| Lead       | ND        | 0.25                     |           |             |                                         |          |              |      |          |      |
| Nickel     | ND        | 0.50                     |           |             |                                         |          |              |      |          |      |
| Selenium   | ND        | 2.5                      |           |             |                                         |          |              |      |          |      |
| Silver     | ND        | 0.25                     |           |             |                                         |          |              |      |          |      |
| Vanadium   | ND        | 2.5                      |           |             |                                         |          |              |      |          |      |
| Zinc       | ND        | 2.5                      |           |             |                                         |          |              |      |          |      |

|            |           |      |                          |             |                                         |          |              |      |          |      |
|------------|-----------|------|--------------------------|-------------|-----------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | LCS-15684 |      | SampType: LCS            |             | TestCode: EPA Method 6010B: Soil Metals |          |              |      |          |      |
| Client ID: | LCSS      |      | Batch ID: 15684          |             | RunNo: 21647                            |          |              |      |          |      |
| Prep Date: | 10/2/2014 |      | Analysis Date: 10/3/2014 |             | SeqNo: 635291                           |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                    | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Antimony   | 26        | 2.5  | 25.00                    | 0           | 103                                     | 80       | 120          |      |          |      |
| Arsenic    | 25        | 2.5  | 25.00                    | 0           | 100                                     | 80       | 120          |      |          |      |
| Barium     | 26        | 0.10 | 25.00                    | 0           | 103                                     | 80       | 120          |      |          |      |
| Beryllium  | 26        | 0.15 | 25.00                    | 0           | 104                                     | 80       | 120          |      |          |      |
| Cadmium    | 25        | 0.10 | 25.00                    | 0           | 99.3                                    | 80       | 120          |      |          |      |
| Chromium   | 26        | 0.30 | 25.00                    | 0           | 103                                     | 80       | 120          |      |          |      |
| Cobalt     | 25        | 0.30 | 25.00                    | 0           | 102                                     | 80       | 120          |      |          |      |
| Lead       | 25        | 0.25 | 25.00                    | 0           | 101                                     | 80       | 120          |      |          |      |
| Nickel     | 26        | 0.50 | 25.00                    | 0           | 104                                     | 80       | 120          |      |          |      |
| Selenium   | 25        | 2.5  | 25.00                    | 0           | 99.6                                    | 80       | 120          |      |          |      |
| Silver     | 5.1       | 0.25 | 5.000                    | 0           | 102                                     | 80       | 120          |      |          |      |
| Vanadium   | 26        | 2.5  | 25.00                    | 0           | 104                                     | 80       | 120          |      |          |      |
| Zinc       | 25        | 2.5  | 25.00                    | 0           | 98.9                                    | 80       | 120          |      |          |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Sample Log-In Check List

Client Name: **Western Refining Southw**

Work Order Number: **1409E44**

RcptNo: 1

Received by/date:

Logged By: **Ashley Gallegos**

9/27/2014 5:45:00 AM

Completed By: **Ashley Gallegos**

9/27/2014 3:07:19 PM

Reviewed By:

CS

09/29/14

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks: per TP sample IDs on LOC are correct/MS 09/30/14

### 18. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.1                     | Good      | Yes         |         |           |           |





# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                    | Analytical Method              |
|----------------------------|--------------------------------|
| Antimony                   | SW-846 method 6010/6020        |
| Arsenic                    | SW-846 method 6010/6020        |
| Barium                     | SW-846 method 6010/6020        |
| Beryllium                  | SW-846 method 6010/6020        |
| Cadmium                    | SW-846 method 6010/6020        |
| Chromium                   | SW-846 method 6010/6020        |
| <del>Chromium VI</del>     | <del>SW-846 Method 6060A</del> |
| Cobalt                     | SW-846 method 6010/6020        |
| Cyanide                    | SW-846 method 335.4/335.2 mod  |
| Lead                       | SW-846 method 6010/6020        |
| <del>Tetraethyl lead</del> | <del>SW-846 method 6270G</del> |
| Mercury                    | SW-846 method 7470/7471        |
| Nickel                     | SW-846 method 6010/6020        |
| Selenium                   | SW-846 method 6010/6020        |
| Silver                     | SW-846 method 6010/6020        |
| Vanadium                   | SW-846 method 6010/6020        |
| Zinc                       | SW-846 method 6010/6020        |



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

December 01, 2014

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1410E28

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/31/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

## Case Narrative

WO#: 1410E28  
Date: 12/1/2014

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**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

---

Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-001A

**Client Sample ID:** MW-71  
**Collection Date:** 10/30/2014 2:00:00 PM  
**Matrix:** Aqueous

| Analyses                           | Result | RL  | Qual | Units | DF           | Date Analyzed          | Batch ID |
|------------------------------------|--------|-----|------|-------|--------------|------------------------|----------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |       | Analyst: DJF |                        |          |
| Benzene                            | 17000  | 500 |      | µg/L  | 500          | 11/10/2014 12:05:09 PM | R22448   |
| Toluene                            | 12000  | 500 |      | µg/L  | 500          | 11/10/2014 12:05:09 PM | R22448   |
| Ethylbenzene                       | 3000   | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Methyl tert-butyl ether (MTBE)     | 1200   | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,2,4-Trimethylbenzene             | 2100   | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,3,5-Trimethylbenzene             | 450    | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,2-Dichloroethane (EDC)           | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,2-Dibromoethane (EDB)            | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Naphthalene                        | 540    | 100 |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1-Methylnaphthalene                | ND     | 200 |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 2-Methylnaphthalene                | ND     | 200 |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Acetone                            | ND     | 500 |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Bromobenzene                       | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Bromodichloromethane               | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Bromoform                          | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Bromomethane                       | ND     | 150 |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 2-Butanone                         | ND     | 500 |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Carbon disulfide                   | ND     | 500 |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Carbon Tetrachloride               | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Chlorobenzene                      | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Chloroethane                       | ND     | 100 |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Chloroform                         | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Chloromethane                      | ND     | 150 |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 2-Chlorotoluene                    | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 4-Chlorotoluene                    | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| cis-1,2-DCE                        | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| cis-1,3-Dichloropropene            | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,2-Dibromo-3-chloropropane        | ND     | 100 |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Dibromochloromethane               | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Dibromomethane                     | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,2-Dichlorobenzene                | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,3-Dichlorobenzene                | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,4-Dichlorobenzene                | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Dichlorodifluoromethane            | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,1-Dichloroethane                 | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,1-Dichloroethene                 | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,2-Dichloropropane                | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,3-Dichloropropane                | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 2,2-Dichloropropane                | ND     | 100 |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| 1,1-Dichloropropene                | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |
| Hexachlorobutadiene                | ND     | 50  |      | µg/L  | 50           | 11/10/2014 12:33:09 PM | R22448   |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

**Analytical Report**Lab Order: **1410E28**Date Reported: **12/1/2014****Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-001A

**Client Sample ID:** MW-71  
**Collection Date:** 10/30/2014 2:00:00 PM  
**Matrix:** Aqueous

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed          | Batch ID |
|------------------------------------|--------|--------|------|---------------------|----|------------------------|----------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>DJF</b> |    |                        |          |
| 2-Hexanone                         | ND     | 500    |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Isopropylbenzene                   | 140    | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| 4-Isopropyltoluene                 | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| 4-Methyl-2-pentanone               | ND     | 500    |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Methylene Chloride                 | ND     | 150    |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| n-Butylbenzene                     | ND     | 150    |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| n-Propylbenzene                    | 330    | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| sec-Butylbenzene                   | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Styrene                            | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| tert-Butylbenzene                  | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| 1,1,1,2-Tetrachloroethane          | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| 1,1,2,2-Tetrachloroethane          | ND     | 100    |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Tetrachloroethene (PCE)            | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| trans-1,2-DCE                      | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| trans-1,3-Dichloropropene          | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| 1,2,3-Trichlorobenzene             | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| 1,2,4-Trichlorobenzene             | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| 1,1,1-Trichloroethane              | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| 1,1,2-Trichloroethane              | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Trichloroethene (TCE)              | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Trichlorofluoromethane             | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| 1,2,3-Trichloropropane             | ND     | 100    |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Vinyl chloride                     | ND     | 50     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Xylenes, Total                     | 12000  | 75     |      | µg/L                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Surr: 1,2-Dichloroethane-d4        | 83.8   | 70-130 |      | %REC                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Surr: 4-Bromofluorobenzene         | 92.3   | 70-130 |      | %REC                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Surr: Dibromofluoromethane         | 84.7   | 70-130 |      | %REC                | 50 | 11/10/2014 12:33:09 PM | R22448   |
| Surr: Toluene-d8                   | 94.4   | 70-130 |      | %REC                | 50 | 11/10/2014 12:33:09 PM | R22448   |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-001B

**Client Sample ID:** MW-71  
**Collection Date:** 10/30/2014 2:00:00 PM  
**Matrix:** Aqueous

| Analyses                                | Result | RL     | Qual | Units | DF | Date Analyzed        | Batch ID            |
|-----------------------------------------|--------|--------|------|-------|----|----------------------|---------------------|
| <b>EPA METHOD 8015D: GASOLINE RANGE</b> |        |        |      |       |    |                      | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)           | 130    | 2.5    |      | mg/L  | 50 | 11/3/2014 6:09:04 PM | R22308              |
| Surr: BFB                               | 106    | 80-120 |      | %REC  | 50 | 11/3/2014 6:09:04 PM | R22308              |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

**Analytical Report**Lab Order: **1410E28****Hall Environmental Analysis Laboratory, Inc.**Date Reported: **12/1/2014****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** MW-71**Project:** GROUP 9**Collection Date:** 10/30/2014 2:00:00 PM**Lab ID:** 1410E28-001C**Matrix:** Aqueous

| Analyses                                   | Result | RL   | Qual | Units                  | DF | Date Analyzed        | Batch ID            |
|--------------------------------------------|--------|------|------|------------------------|----|----------------------|---------------------|
| <b>EPA METHOD 300.0: ANIONS</b>            |        |      |      |                        |    |                      | Analyst: <b>LGP</b> |
| Chloride                                   | 180    | 10   |      | mg/L                   | 20 | 11/1/2014 3:51:08 AM | R22290              |
| Nitrogen, Nitrite (As N)                   | ND     | 0.50 |      | mg/L                   | 5  | 11/1/2014 3:13:55 AM | R22290              |
| Nitrogen, Nitrate (As N)                   | ND     | 0.50 |      | mg/L                   | 5  | 11/1/2014 3:13:55 AM | R22290              |
| Sulfate                                    | 130    | 2.5  |      | mg/L                   | 5  | 11/1/2014 3:13:55 AM | R22290              |
| <b>SM2320B: ALKALINITY</b>                 |        |      |      |                        |    |                      | Analyst: <b>JRR</b> |
| Bicarbonate (As CaCO <sub>3</sub> )        | 1100   | 20   |      | mg/L CaCO <sub>3</sub> | 1  | 11/5/2014 1:51:27 PM | R22374              |
| Carbonate (As CaCO <sub>3</sub> )          | ND     | 2.0  |      | mg/L CaCO <sub>3</sub> | 1  | 11/5/2014 1:51:27 PM | R22374              |
| Total Alkalinity (as CaCO <sub>3</sub> )   | 1100   | 20   |      | mg/L CaCO <sub>3</sub> | 1  | 11/5/2014 1:51:27 PM | R22374              |
| <b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b> |        |      |      |                        |    |                      | Analyst: <b>KS</b>  |
| Total Dissolved Solids                     | 1650   | 100  | *    | mg/L                   | 1  | 11/5/2014 2:24:00 PM | 16230               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-001D

**Client Sample ID:** MW-71  
**Collection Date:** 10/30/2014 2:00:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL      | Qual | Units        | DF | Date Analyzed         | Batch ID |
|---------------------------------------|--------|---------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: TOTAL METALS</b> |        |         |      | Analyst: JLF |    |                       |          |
| Barium                                | 1.6    | 0.010   |      | mg/L         | 5  | 11/10/2014 4:01:51 PM | 16281    |
| Beryllium                             | ND     | 0.0020  |      | mg/L         | 1  | 11/7/2014 6:56:21 PM  | 16281    |
| Cadmium                               | ND     | 0.0020  |      | mg/L         | 1  | 11/7/2014 6:56:21 PM  | 16281    |
| Calcium                               | 190    | 5.0     |      | mg/L         | 5  | 11/10/2014 4:01:51 PM | 16281    |
| Chromium                              | 0.0074 | 0.0060  |      | mg/L         | 1  | 11/7/2014 6:56:21 PM  | 16281    |
| Cobalt                                | 0.017  | 0.0060  |      | mg/L         | 1  | 11/7/2014 6:56:21 PM  | 16281    |
| Iron                                  | 33     | 1.0     | *    | mg/L         | 50 | 11/10/2014 4:03:34 PM | 16281    |
| Lead                                  | 0.021  | 0.0050  | *    | mg/L         | 1  | 11/7/2014 6:56:21 PM  | 16281    |
| Magnesium                             | 86     | 1.0     |      | mg/L         | 1  | 11/7/2014 6:56:21 PM  | 16281    |
| Manganese                             | 6.2    | 0.10    | *    | mg/L         | 50 | 11/10/2014 4:03:34 PM | 16281    |
| Nickel                                | 0.027  | 0.010   |      | mg/L         | 1  | 11/7/2014 6:56:21 PM  | 16281    |
| Potassium                             | 6.5    | 1.0     |      | mg/L         | 1  | 11/7/2014 6:56:21 PM  | 16281    |
| Silver                                | ND     | 0.0050  |      | mg/L         | 1  | 11/7/2014 6:56:21 PM  | 16281    |
| Sodium                                | 350    | 5.0     |      | mg/L         | 5  | 11/10/2014 4:01:51 PM | 16281    |
| Vanadium                              | ND     | 0.050   |      | mg/L         | 1  | 11/7/2014 6:56:21 PM  | 16281    |
| Zinc                                  | 0.062  | 0.010   |      | mg/L         | 1  | 11/7/2014 6:56:21 PM  | 16281    |
| <b>200.8 ICPMS METALS:TOTAL</b>       |        |         |      | Analyst: DBD |    |                       |          |
| Antimony                              | ND     | 0.0010  |      | mg/L         | 1  | 11/13/2014 2:50:16 PM | 16281    |
| Arsenic                               | 0.014  | 0.010   | *    | mg/L         | 10 | 11/13/2014 5:56:58 PM | 16281    |
| Selenium                              | ND     | 0.010   |      | mg/L         | 10 | 11/13/2014 5:56:58 PM | 16281    |
| <b>EPA METHOD 245.1: MERCURY</b>      |        |         |      | Analyst: MMD |    |                       |          |
| Mercury                               | ND     | 0.00020 |      | mg/L         | 1  | 11/10/2014 1:38:39 PM | 16303    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-001E

**Client Sample ID:** MW-71  
**Collection Date:** 10/30/2014 2:00:00 PM  
**Matrix:** Aqueous

| Analyses                                  | Result | RL      | Qual | Units        | DF | Date Analyzed         | Batch ID |
|-------------------------------------------|--------|---------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: DISSOLVED METALS</b> |        |         |      | Analyst: JLF |    |                       |          |
| Barium                                    | 0.50   | 0.0020  |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| Beryllium                                 | ND     | 0.0020  |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| Cadmium                                   | ND     | 0.0020  |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| Calcium                                   | 190    | 5.0     |      | mg/L         | 5  | 11/3/2014 1:24:31 PM  | R22295   |
| Chromium                                  | ND     | 0.0060  |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| Cobalt                                    | ND     | 0.0060  |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| Iron                                      | 3.7    | 0.10    | *    | mg/L         | 5  | 11/3/2014 1:24:31 PM  | R22295   |
| Lead                                      | 0.0071 | 0.0050  |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| Magnesium                                 | 88     | 1.0     |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| Manganese                                 | 4.8    | 0.010   | *    | mg/L         | 5  | 11/3/2014 1:24:31 PM  | R22295   |
| Nickel                                    | 0.011  | 0.010   |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| Potassium                                 | 4.6    | 1.0     |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| Silver                                    | ND     | 0.0050  |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| Sodium                                    | 340    | 5.0     |      | mg/L         | 5  | 11/3/2014 1:24:31 PM  | R22295   |
| Vanadium                                  | ND     | 0.050   |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| Zinc                                      | ND     | 0.010   |      | mg/L         | 1  | 11/3/2014 1:22:50 PM  | R22295   |
| <b>EPA 200.8: DISSOLVED METALS</b>        |        |         |      | Analyst: DBD |    |                       |          |
| Antimony                                  | ND     | 0.0010  |      | mg/L         | 1  | 11/12/2014 1:19:03 PM | R22504   |
| Arsenic                                   | ND     | 0.010   |      | mg/L         | 10 | 11/12/2014 4:46:24 PM | R22504   |
| Selenium                                  | ND     | 0.10    |      | mg/L         | 10 | 11/12/2014 4:46:24 PM | R22504   |
| <b>EPA METHOD 245.1: MERCURY</b>          |        |         |      | Analyst: MMD |    |                       |          |
| Mercury                                   | ND     | 0.00020 |      | mg/L         | 1  | 11/10/2014 1:40:24 PM | 16303    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-001F

**Client Sample ID:** MW-71  
**Collection Date:** 10/30/2014 2:00:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL       | Qual | Units | DF | Date Analyzed        | Batch ID            |
|---------------------------------------|--------|----------|------|-------|----|----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE</b> |        |          |      |       |    |                      | Analyst: <b>BCN</b> |
| Diesel Range Organics (DRO)           | 44     | 2.0      |      | mg/L  | 10 | 11/6/2014 9:56:45 PM | 16197               |
| Motor Oil Range Organics (MRO)        | ND     | 25       |      | mg/L  | 10 | 11/6/2014 9:56:45 PM | 16197               |
| Surr: DNOP                            | 0      | 75.2-161 | S    | %REC  | 10 | 11/6/2014 9:56:45 PM | 16197               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-001G

**Client Sample ID:** MW-71  
**Collection Date:** 10/30/2014 2:00:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL | Qual | Units        | DF | Date Analyzed        | Batch ID |
|----------------------------------------|--------|----|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |    |      | Analyst: DAM |    |                      |          |
| Acenaphthene                           | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Acenaphthylene                         | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Aniline                                | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Anthracene                             | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Azobenzene                             | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Benz(a)anthracene                      | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Benzo(a)pyrene                         | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Benzo(b)fluoranthene                   | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Benzo(g,h,i)perylene                   | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Benzo(k)fluoranthene                   | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Benzoic acid                           | ND     | 20 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Benzyl alcohol                         | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Bis(2-chloroethoxy)methane             | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Bis(2-chloroethyl)ether                | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Bis(2-chloroisopropyl)ether            | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Bis(2-ethylhexyl)phthalate             | 11     | 10 | B    | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 4-Bromophenyl phenyl ether             | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Butyl benzyl phthalate                 | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Carbazole                              | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 4-Chloro-3-methylphenol                | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 4-Chloroaniline                        | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 2-Chloronaphthalene                    | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 2-Chlorophenol                         | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 4-Chlorophenyl phenyl ether            | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Chrysene                               | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Di-n-butyl phthalate                   | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Di-n-octyl phthalate                   | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Dibenz(a,h)anthracene                  | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Dibenzofuran                           | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 1,2-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 1,3-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 1,4-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 3,3'-Dichlorobenzidine                 | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Diethyl phthalate                      | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| Dimethyl phthalate                     | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 2,4-Dichlorophenol                     | ND     | 20 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 2,4-Dimethylphenol                     | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 4,6-Dinitro-2-methylphenol             | ND     | 20 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 2,4-Dinitrophenol                      | ND     | 20 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 2,4-Dinitrotoluene                     | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |
| 2,6-Dinitrotoluene                     | ND     | 10 |      | µg/L         | 1  | 11/6/2014 2:03:23 PM | 16261    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-001G

**Client Sample ID:** MW-71  
**Collection Date:** 10/30/2014 2:00:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL        | Qual | Units | DF | Date Analyzed        | Batch ID     |
|----------------------------------------|--------|-----------|------|-------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |       |    |                      | Analyst: DAM |
| Fluoranthene                           | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Fluorene                               | 52     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Hexachlorobenzene                      | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Hexachlorobutadiene                    | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Hexachlorocyclopentadiene              | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Hexachloroethane                       | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Isophorone                             | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| 1-Methylnaphthalene                    | 920    | 100       |      | µg/L  | 10 | 11/6/2014 3:55:29 PM | 16261        |
| 2-Methylnaphthalene                    | 1600   | 100       |      | µg/L  | 10 | 11/6/2014 3:55:29 PM | 16261        |
| 2-Methylphenol                         | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| 3+4-Methylphenol                       | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| N-Nitrosodi-n-propylamine              | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| N-Nitrosodimethylamine                 | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| N-Nitrosodiphenylamine                 | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Naphthalene                            | 1100   | 100       |      | µg/L  | 10 | 11/6/2014 3:55:29 PM | 16261        |
| 2-Nitroaniline                         | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| 3-Nitroaniline                         | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| 4-Nitroaniline                         | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Nitrobenzene                           | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| 2-Nitrophenol                          | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| 4-Nitrophenol                          | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Pentachlorophenol                      | ND     | 20        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Phenanthrene                           | 150    | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Phenol                                 | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Pyrene                                 | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Pyridine                               | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| 2,4,6-Trichlorophenol                  | ND     | 10        |      | µg/L  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Surr: 2-Fluorophenol                   | 8.08   | 17.6-104  | S    | %REC  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Surr: Phenol-d5                        | 13.0   | 17.7-89.9 | S    | %REC  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Surr: 2,4,6-Tribromophenol             | 28.2   | 16.3-122  |      | %REC  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Surr: Nitrobenzene-d5                  | 0      | 45.3-117  | S    | %REC  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Surr: 2-Fluorobiphenyl                 | 38.4   | 43-113    | S    | %REC  | 1  | 11/6/2014 2:03:23 PM | 16261        |
| Surr: 4-Terphenyl-d14                  | 45.3   | 47.6-122  | S    | %REC  | 1  | 11/6/2014 2:03:23 PM | 16261        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-002A

**Client Sample ID:** MW-77  
**Collection Date:** 10/30/2014 1:00:00 PM  
**Matrix:** Aqueous

| Analyses                           | Result | RL  | Qual | Units        | DF | Date Analyzed          | Batch ID |
|------------------------------------|--------|-----|------|--------------|----|------------------------|----------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      | Analyst: DJF |    |                        |          |
| Benzene                            | 1400   | 50  |      | µg/L         | 50 | 11/10/2014 2:53:35 PM  | R22448   |
| Toluene                            | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Ethylbenzene                       | 15     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Methyl tert-butyl ether (MTBE)     | 35     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,2,4-Trimethylbenzene             | 240    | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,3,5-Trimethylbenzene             | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,2-Dichloroethane (EDC)           | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,2-Dibromoethane (EDB)            | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Naphthalene                        | 380    | 10  |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1-Methylnaphthalene                | 190    | 20  |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 2-Methylnaphthalene                | 290    | 20  |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Acetone                            | ND     | 50  |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Bromobenzene                       | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Bromodichloromethane               | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Bromoform                          | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Bromomethane                       | ND     | 15  |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 2-Butanone                         | ND     | 50  |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Carbon disulfide                   | ND     | 50  |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Carbon Tetrachloride               | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Chlorobenzene                      | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Chloroethane                       | ND     | 10  |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Chloroform                         | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Chloromethane                      | ND     | 15  |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 2-Chlorotoluene                    | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 4-Chlorotoluene                    | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| cis-1,2-DCE                        | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| cis-1,3-Dichloropropene            | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,2-Dibromo-3-chloropropane        | ND     | 10  |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Dibromochloromethane               | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Dibromomethane                     | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,2-Dichlorobenzene                | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,3-Dichlorobenzene                | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,4-Dichlorobenzene                | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Dichlorodifluoromethane            | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,1-Dichloroethane                 | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,1-Dichloroethene                 | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,2-Dichloropropane                | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,3-Dichloropropane                | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 2,2-Dichloropropane                | ND     | 10  |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,1-Dichloropropene                | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Hexachlorobutadiene                | ND     | 5.0 |      | µg/L         | 5  | 11/11/2014 12:51:26 PM | R22481   |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-002A

**Client Sample ID:** MW-77  
**Collection Date:** 10/30/2014 1:00:00 PM  
**Matrix:** Aqueous

| Analyses                           | Result | RL     | Qual | Units | DF | Date Analyzed          | Batch ID |
|------------------------------------|--------|--------|------|-------|----|------------------------|----------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |       |    | Analyst: DJF           |          |
| 2-Hexanone                         | ND     | 50     |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Isopropylbenzene                   | 73     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 4-Isopropyltoluene                 | 9.1    | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 4-Methyl-2-pentanone               | ND     | 50     |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Methylene Chloride                 | ND     | 15     |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| n-Butylbenzene                     | ND     | 15     |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| n-Propylbenzene                    | 72     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| sec-Butylbenzene                   | 14     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Styrene                            | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| tert-Butylbenzene                  | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,1,1,2-Tetrachloroethane          | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,1,2,2-Tetrachloroethane          | ND     | 10     |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Tetrachloroethene (PCE)            | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| trans-1,2-DCE                      | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| trans-1,3-Dichloropropene          | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,2,3-Trichlorobenzene             | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,2,4-Trichlorobenzene             | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,1,1-Trichloroethane              | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,1,2-Trichloroethane              | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Trichloroethene (TCE)              | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Trichlorofluoromethane             | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| 1,2,3-Trichloropropane             | ND     | 10     |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Vinyl chloride                     | ND     | 5.0    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Xylenes, Total                     | ND     | 7.5    |      | µg/L  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Surr: 1,2-Dichloroethane-d4        | 68.4   | 70-130 | S    | %REC  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Surr: 4-Bromofluorobenzene         | 78.4   | 70-130 |      | %REC  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Surr: Dibromofluoromethane         | 79.6   | 70-130 |      | %REC  | 5  | 11/11/2014 12:51:26 PM | R22481   |
| Surr: Toluene-d8                   | 95.2   | 70-130 |      | %REC  | 5  | 11/11/2014 12:51:26 PM | R22481   |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-002B

**Client Sample ID:** MW-77  
**Collection Date:** 10/30/2014 1:00:00 PM  
**Matrix:** Aqueous

| Analyses                                | Result | RL     | Qual | Units | DF | Date Analyzed        | Batch ID            |
|-----------------------------------------|--------|--------|------|-------|----|----------------------|---------------------|
| <b>EPA METHOD 8015D: GASOLINE RANGE</b> |        |        |      |       |    |                      | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)           | 9.1    | 2.5    |      | mg/L  | 50 | 11/3/2014 7:34:44 PM | R22308              |
| Surr: BFB                               | 102    | 80-120 |      | %REC  | 50 | 11/3/2014 7:34:44 PM | R22308              |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

**Analytical Report**Lab Order: **1410E28**Date Reported: **12/1/2014****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** MW-77**Project:** GROUP 9**Collection Date:** 10/30/2014 1:00:00 PM**Lab ID:** 1410E28-002C**Matrix:** Aqueous

| <b>Analyses</b>                            | <b>Result</b> | <b>RL</b> | <b>Qual</b> | <b>Units</b> | <b>DF</b> | <b>Date Analyzed</b>  | <b>Batch ID</b>     |
|--------------------------------------------|---------------|-----------|-------------|--------------|-----------|-----------------------|---------------------|
| <b>EPA METHOD 300.0: ANIONS</b>            |               |           |             |              |           |                       | Analyst: <b>LGP</b> |
| Chloride                                   | 460           | 25        | *           | mg/L         | 50        | 11/12/2014 2:55:30 PM | R22517              |
| Nitrogen, Nitrite (As N)                   | ND            | 0.50      |             | mg/L         | 5         | 11/1/2014 4:03:33 AM  | R22290              |
| Nitrogen, Nitrate (As N)                   | ND            | 0.50      |             | mg/L         | 5         | 11/1/2014 4:03:33 AM  | R22290              |
| Sulfate                                    | 13            | 2.5       |             | mg/L         | 5         | 11/1/2014 4:03:33 AM  | R22290              |
| <b>SM2320B: ALKALINITY</b>                 |               |           |             |              |           |                       | Analyst: <b>JRR</b> |
| Bicarbonate (As CaCO3)                     | 920           | 20        |             | mg/L CaCO3   | 1         | 11/5/2014 2:31:01 PM  | R22374              |
| Carbonate (As CaCO3)                       | ND            | 2.0       |             | mg/L CaCO3   | 1         | 11/5/2014 2:31:01 PM  | R22374              |
| Total Alkalinity (as CaCO3)                | 920           | 20        |             | mg/L CaCO3   | 1         | 11/5/2014 2:31:01 PM  | R22374              |
| <b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b> |               |           |             |              |           |                       | Analyst: <b>KS</b>  |
| Total Dissolved Solids                     | 1700          | 100       | *           | mg/L         | 1         | 11/5/2014 2:24:00 PM  | 16230               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-002D

**Client Sample ID:** MW-77  
**Collection Date:** 10/30/2014 1:00:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL      | Qual | Units        | DF  | Date Analyzed         | Batch ID |
|---------------------------------------|--------|---------|------|--------------|-----|-----------------------|----------|
| <b>EPA METHOD 200.7: TOTAL METALS</b> |        |         |      | Analyst: JLF |     |                       |          |
| Barium                                | 3.7    | 0.010   | *    | mg/L         | 5   | 11/10/2014 4:05:29 PM | 16281    |
| Beryllium                             | 0.0039 | 0.0020  |      | mg/L         | 1   | 11/7/2014 6:58:03 PM  | 16281    |
| Cadmium                               | ND     | 0.0020  |      | mg/L         | 1   | 11/7/2014 6:58:03 PM  | 16281    |
| Calcium                               | 220    | 5.0     |      | mg/L         | 5   | 11/10/2014 4:05:29 PM | 16281    |
| Chromium                              | 0.057  | 0.0060  |      | mg/L         | 1   | 11/7/2014 6:58:03 PM  | 16281    |
| Cobalt                                | 0.036  | 0.0060  |      | mg/L         | 1   | 11/7/2014 6:58:03 PM  | 16281    |
| Iron                                  | 98     | 2.0     | *    | mg/L         | 100 | 11/10/2014 4:07:23 PM | 16281    |
| Lead                                  | 0.068  | 0.0050  | *    | mg/L         | 1   | 11/7/2014 6:58:03 PM  | 16281    |
| Magnesium                             | 75     | 1.0     |      | mg/L         | 1   | 11/7/2014 6:58:03 PM  | 16281    |
| Manganese                             | 13     | 0.20    | *    | mg/L         | 100 | 11/10/2014 4:07:23 PM | 16281    |
| Nickel                                | 0.055  | 0.010   |      | mg/L         | 1   | 11/7/2014 6:58:03 PM  | 16281    |
| Potassium                             | 9.9    | 1.0     |      | mg/L         | 1   | 11/7/2014 6:58:03 PM  | 16281    |
| Silver                                | ND     | 0.0050  |      | mg/L         | 1   | 11/7/2014 6:58:03 PM  | 16281    |
| Sodium                                | 380    | 5.0     |      | mg/L         | 5   | 11/10/2014 4:05:29 PM | 16281    |
| Vanadium                              | 0.11   | 0.050   |      | mg/L         | 1   | 11/7/2014 6:58:03 PM  | 16281    |
| Zinc                                  | 0.22   | 0.010   |      | mg/L         | 1   | 11/7/2014 6:58:03 PM  | 16281    |
| <b>200.8 ICPMS METALS:TOTAL</b>       |        |         |      | Analyst: DBD |     |                       |          |
| Antimony                              | ND     | 0.0010  |      | mg/L         | 1   | 11/13/2014 2:55:37 PM | 16281    |
| Arsenic                               | 0.010  | 0.0050  | *    | mg/L         | 5   | 11/13/2014 6:00:28 PM | 16281    |
| Selenium                              | 0.0071 | 0.0050  |      | mg/L         | 5   | 11/13/2014 6:00:28 PM | 16281    |
| <b>EPA METHOD 245.1: MERCURY</b>      |        |         |      | Analyst: MMD |     |                       |          |
| Mercury                               | ND     | 0.00020 |      | mg/L         | 1   | 11/10/2014 1:42:09 PM | 16303    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-002E

**Client Sample ID:** MW-77  
**Collection Date:** 10/30/2014 1:00:00 PM  
**Matrix:** Aqueous

| Analyses                                  | Result | RL      | Qual | Units        | DF | Date Analyzed         | Batch ID |
|-------------------------------------------|--------|---------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: DISSOLVED METALS</b> |        |         |      | Analyst: JLF |    |                       |          |
| Barium                                    | 1.8    | 0.010   |      | mg/L         | 5  | 11/3/2014 1:36:05 PM  | R22295   |
| Beryllium                                 | ND     | 0.0020  |      | mg/L         | 1  | 11/3/2014 1:34:23 PM  | R22295   |
| Cadmium                                   | ND     | 0.0020  |      | mg/L         | 1  | 11/3/2014 1:34:23 PM  | R22295   |
| Calcium                                   | 180    | 5.0     |      | mg/L         | 5  | 11/3/2014 1:36:05 PM  | R22295   |
| Chromium                                  | ND     | 0.0060  |      | mg/L         | 1  | 11/3/2014 1:34:23 PM  | R22295   |
| Cobalt                                    | ND     | 0.0060  |      | mg/L         | 1  | 11/3/2014 1:34:23 PM  | R22295   |
| Iron                                      | 4.1    | 0.20    | *    | mg/L         | 10 | 11/3/2014 1:41:52 PM  | R22295   |
| Lead                                      | 0.0076 | 0.0050  |      | mg/L         | 1  | 11/3/2014 1:34:23 PM  | R22295   |
| Magnesium                                 | 58     | 1.0     |      | mg/L         | 1  | 11/3/2014 1:34:23 PM  | R22295   |
| Manganese                                 | 7.3    | 0.020   | *    | mg/L         | 10 | 11/3/2014 1:41:52 PM  | R22295   |
| Nickel                                    | ND     | 0.010   |      | mg/L         | 1  | 11/3/2014 1:34:23 PM  | R22295   |
| Potassium                                 | 5.6    | 1.0     |      | mg/L         | 1  | 11/3/2014 1:34:23 PM  | R22295   |
| Silver                                    | ND     | 0.0050  |      | mg/L         | 1  | 11/3/2014 1:34:23 PM  | R22295   |
| Sodium                                    | 360    | 5.0     |      | mg/L         | 5  | 11/3/2014 1:36:05 PM  | R22295   |
| Vanadium                                  | ND     | 0.050   |      | mg/L         | 1  | 11/3/2014 1:34:23 PM  | R22295   |
| Zinc                                      | 0.041  | 0.010   |      | mg/L         | 1  | 11/3/2014 1:34:23 PM  | R22295   |
| <b>EPA 200.8: DISSOLVED METALS</b>        |        |         |      | Analyst: DBD |    |                       |          |
| Antimony                                  | ND     | 0.0010  |      | mg/L         | 1  | 11/12/2014 1:24:26 PM | R22504   |
| Arsenic                                   | ND     | 0.0050  |      | mg/L         | 5  | 11/12/2014 4:49:30 PM | R22504   |
| Selenium                                  | 0.010  | 0.0050  |      | mg/L         | 5  | 11/12/2014 4:49:30 PM | R22504   |
| <b>EPA METHOD 245.1: MERCURY</b>          |        |         |      | Analyst: MMD |    |                       |          |
| Mercury                                   | ND     | 0.00020 |      | mg/L         | 1  | 11/10/2014 1:43:55 PM | 16303    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-002F

**Client Sample ID:** MW-77  
**Collection Date:** 10/30/2014 1:00:00 PM  
**Matrix:** Aqueous

| Analyses                              | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch ID            |
|---------------------------------------|--------|----------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE</b> |        |          |      |       |    |                       | Analyst: <b>BCN</b> |
| Diesel Range Organics (DRO)           | 180    | 2.0      |      | mg/L  | 10 | 11/6/2014 10:26:25 PM | 16197               |
| Motor Oil Range Organics (MRO)        | ND     | 25       |      | mg/L  | 10 | 11/6/2014 10:26:25 PM | 16197               |
| Surr: DNOP                            | 0      | 75.2-161 | S    | %REC  | 10 | 11/6/2014 10:26:25 PM | 16197               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |

# Analytical Report

Lab Order: 1410E28

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-002G

**Client Sample ID:** MW-77  
**Collection Date:** 10/30/2014 1:00:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL | Qual | Units        | DF | Date Analyzed        | Batch ID |
|----------------------------------------|--------|----|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |    |      | Analyst: DAM |    |                      |          |
| Acenaphthene                           | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Acenaphthylene                         | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Aniline                                | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Anthracene                             | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Azobenzene                             | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Benz(a)anthracene                      | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Benzo(a)pyrene                         | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Benzo(b)fluoranthene                   | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Benzo(g,h,i)perylene                   | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Benzo(k)fluoranthene                   | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Benzoic acid                           | ND     | 20 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Benzyl alcohol                         | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Bis(2-chloroethoxy)methane             | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Bis(2-chloroethyl)ether                | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Bis(2-chloroisopropyl)ether            | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Bis(2-ethylhexyl)phthalate             | 36     | 10 | B    | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 4-Bromophenyl phenyl ether             | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Butyl benzyl phthalate                 | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Carbazole                              | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 4-Chloro-3-methylphenol                | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 4-Chloroaniline                        | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 2-Chloronaphthalene                    | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 2-Chlorophenol                         | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 4-Chlorophenyl phenyl ether            | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Chrysene                               | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Di-n-butyl phthalate                   | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Di-n-octyl phthalate                   | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Dibenz(a,h)anthracene                  | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Dibenzofuran                           | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 1,2-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 1,3-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 1,4-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 3,3'-Dichlorobenzidine                 | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Diethyl phthalate                      | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Dimethyl phthalate                     | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 2,4-Dichlorophenol                     | ND     | 20 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 2,4-Dimethylphenol                     | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 4,6-Dinitro-2-methylphenol             | ND     | 20 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 2,4-Dinitrophenol                      | ND     | 20 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 2,4-Dinitrotoluene                     | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 2,6-Dinitrotoluene                     | ND     | 10 |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1410E28

Date Reported: 12/1/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1410E28-002G

**Client Sample ID:** MW-77  
**Collection Date:** 10/30/2014 1:00:00 PM  
**Matrix:** Aqueous

| Analyses                               | Result | RL        | Qual | Units        | DF | Date Analyzed        | Batch ID |
|----------------------------------------|--------|-----------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: DAM |    |                      |          |
| Fluoranthene                           | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Fluorene                               | 110    | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Hexachlorobenzene                      | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Hexachlorobutadiene                    | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Hexachlorocyclopentadiene              | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Hexachloroethane                       | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Isophorone                             | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 1-Methylnaphthalene                    | 910    | 100       |      | µg/L         | 10 | 11/6/2014 4:23:27 PM | 16261    |
| 2-Methylnaphthalene                    | 1300   | 100       |      | µg/L         | 10 | 11/6/2014 4:23:27 PM | 16261    |
| 2-Methylphenol                         | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 3+4-Methylphenol                       | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| N-Nitrosodi-n-propylamine              | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| N-Nitrosodimethylamine                 | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| N-Nitrosodiphenylamine                 | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Naphthalene                            | 500    | 100       |      | µg/L         | 10 | 11/6/2014 4:23:27 PM | 16261    |
| 2-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 3-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 4-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Nitrobenzene                           | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 2-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 4-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Pentachlorophenol                      | ND     | 20        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Phenanthrene                           | 260    | 100       |      | µg/L         | 10 | 11/6/2014 4:23:27 PM | 16261    |
| Phenol                                 | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Pyrene                                 | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Pyridine                               | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| 2,4,6-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Surr: 2-Fluorophenol                   | 40.5   | 17.6-104  |      | %REC         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Surr: Phenol-d5                        | 40.1   | 17.7-89.9 |      | %REC         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Surr: 2,4,6-Tribromophenol             | 8.22   | 16.3-122  | S    | %REC         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Surr: Nitrobenzene-d5                  | 0      | 45.3-117  | S    | %REC         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Surr: 2-Fluorobiphenyl                 | 42.1   | 43-113    | S    | %REC         | 1  | 11/6/2014 3:27:26 PM | 16261    |
| Surr: 4-Terphenyl-d14                  | 57.3   | 47.6-122  |      | %REC         | 1  | 11/6/2014 3:27:26 PM | 16261    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com  
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 141104009  
**Project Name:** 1410E28

## Analytical Results Report

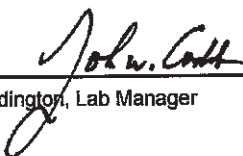
|                         |                      |                        |            |                           |                    |
|-------------------------|----------------------|------------------------|------------|---------------------------|--------------------|
| <b>Sample Number</b>    | 141104009-001        | <b>Sampling Date</b>   | 10/30/2014 | <b>Date/Time Received</b> | 11/4/2014 11:10 AM |
| <b>Client Sample ID</b> | 1410E28-001H / MW-71 | <b>Sampling Time</b>   | 2:00 PM    |                           |                    |
| <b>Matrix</b>           | Water                | <b>Sample Location</b> |            |                           |                    |
| <b>Comments</b>         |                      |                        |            |                           |                    |

| Parameter | Result | Units | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|-------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/L  | 0.01 | 11/11/2014    | CRW     | EPA 335.4 |           |

|                         |                      |                        |            |                           |                    |
|-------------------------|----------------------|------------------------|------------|---------------------------|--------------------|
| <b>Sample Number</b>    | 141104009-002        | <b>Sampling Date</b>   | 10/30/2014 | <b>Date/Time Received</b> | 11/4/2014 11:10 AM |
| <b>Client Sample ID</b> | 1410E28-002H / MW-77 | <b>Sampling Time</b>   | 1:00 PM    |                           |                    |
| <b>Matrix</b>           | Water                | <b>Sample Location</b> |            |                           |                    |
| <b>Comments</b>         |                      |                        |            |                           |                    |

| Parameter | Result | Units | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|-------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/L  | 0.01 | 11/11/2014    | CRW     | EPA 335.4 |           |

Authorized Signature

  
John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level  
ND Not Detected  
PQL Practical Quantitation Limit

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The results reported relate only to the samples indicated.  
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C595; MT:Cert0085; FL(NELAP): E871089

Friday, November 14, 2014

Page 1 of 1

# Anatek Labs, Inc.

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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 141104009  
**Project Name:** 1410E28

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date  | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|------------|---------------|
| Cyanide   | 0.518      | mg/L  | 0.5       | 103.6 | 90-110  | 11/11/2014 | 11/11/2014    |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec  | AR %Rec | Prep Date  | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|-------|---------|------------|---------------|
| 141104010-001 | Cyanide   | 0.238         | 1.26      | mg/L  | 1        | 102.2 | 90-110  | 11/11/2014 | 11/11/2014    |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec  | %RPD | AR %RPD | Prep Date  | Analysis Date |
|-----------|------------|-------|-----------|-------|------|---------|------------|---------------|
| Cyanide   | 1.27       | mg/L  | 1         | 103.2 | 0.8  | 0-20    | 11/11/2014 | 11/11/2014    |

### Method Blank

| Parameter | Result | Units | PQL  | Prep Date  | Analysis Date |
|-----------|--------|-------|------|------------|---------------|
| Cyanide   | ND     | mg/L  | 0.01 | 11/11/2014 | 11/11/2014    |

AR Acceptable Range  
ND Not Detected  
PQL Practical Quantitation Limit  
RPD Relative Percentage Difference

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Friday, November 14, 2014

Page 1 of 1



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

November 07, 2014

Hall Environmental Analysis Laborat  
4901 Hawkins NE  
Albuquerque, NM 87109

Date Received : November 04, 2014  
Description :  
Sample ID : 1410E28-001I MW-71  
Collected By :  
Collection Date : 10/30/14 14:00

ESC Sample # : L731381-01

Site ID :

Project # :

| Parameter           | Result | Det. Limit | Units | Method        | Date     | Dil. |
|---------------------|--------|------------|-------|---------------|----------|------|
| Hexavalent Chromium | BDL    | 0.00050    | mg/l  | 3500Cr C-2011 | 11/06/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 11/07/14 17:29 Printed: 11/07/14 18:03





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(615) 758-5858  
1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

November 07, 2014

Hall Environmental Analysis Laborat  
4901 Hawkins NE  
Albuquerque, NM 87109

Date Received : November 04, 2014  
Description :  
Sample ID : 1410E28-001I MW-77  
Collected By :  
Collection Date : 10/30/14 13:00

ESC Sample # : L731381-02

Site ID :

Project # :

| Parameter           | Result | Det. Limit | Units | Method        | Date     | Dil. |
|---------------------|--------|------------|-------|---------------|----------|------|
| Hexavalent Chromium | BDL    | 0.00050    | mg/l  | 3500Cr C-2011 | 11/06/14 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 11/07/14 17:29 Printed: 11/07/14 18:03



YOUR LAB OF CHOICE

Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report  
Level II

L731381

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

November 07, 2014

| Analyte             | Result  | Laboratory Blank<br>Units % Rec | Limit | Batch    | Date Analyzed  |
|---------------------|---------|---------------------------------|-------|----------|----------------|
| Hexavalent Chromium | < .0005 | mg/l                            |       | WG752985 | 11/06/14 10:35 |

| Analyte             | Units | Result | Duplicate<br>Duplicate | RPD | Limit | Ref Samp   | Batch    |
|---------------------|-------|--------|------------------------|-----|-------|------------|----------|
| Hexavalent Chromium | mg/l  | 0.0    | 0.0                    | 0.0 | 20    | L730450-01 | WG752985 |
| Hexavalent Chromium | mg/l  | 0.0    | 0.0                    | 0.0 | 20    | L730972-01 | WG752985 |

| Analyte             | Units | Laboratory Control Sample<br>Known Val Result | % Rec   | Limit | Batch           |
|---------------------|-------|-----------------------------------------------|---------|-------|-----------------|
| Hexavalent Chromium | mg/l  | .002                                          | 0.00220 | 110.  | 90-110 WG752985 |

| Analyte             | Units | Result  | Ref     | %Rec | Limit  | RPD   | Limit | Batch    |
|---------------------|-------|---------|---------|------|--------|-------|-------|----------|
| Hexavalent Chromium | mg/l  | 0.00219 | 0.00220 | 110. | 90-110 | 0.456 | 20    | WG752985 |

| Analyte             | Units | MS Res | Ref Res | TV  | % Rec | Limit  | Ref Samp   | Batch    |
|---------------------|-------|--------|---------|-----|-------|--------|------------|----------|
| Hexavalent Chromium | mg/l  | 0.0513 | 0.0     | .05 | 100.  | 90-110 | L730726-01 | WG752985 |

| Analyte             | Units | MSD    | Ref    | %Rec | Limit  | RPD  | Limit | Ref Samp   | Batch    |
|---------------------|-------|--------|--------|------|--------|------|-------|------------|----------|
| Hexavalent Chromium | mg/l  | 0.0521 | 0.0513 | 104. | 90-110 | 1.55 | 20    | L730726-01 | WG752985 |

Batch number / Run number / Sample number cross reference

WG752985: R3003179: L731381-01 02

\* \* Calculations are performed prior to rounding of reported values.

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |        |                          |           |             |                                              |          |             |      |          |      |
|------------|--------|--------------------------|-----------|-------------|----------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB     | SampType: MBLK           |           |             | TestCode: EPA Method 200.7: Dissolved Metals |          |             |      |          |      |
| Client ID: | PBW    | Batch ID: R22295         |           |             | RunNo: 22295                                 |          |             |      |          |      |
| Prep Date: |        | Analysis Date: 11/3/2014 |           |             | SeqNo: 656888                                |          | Units: mg/L |      |          |      |
| Analyte    | Result | PQL                      | SPK value | SPK Ref Val | %REC                                         | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | ND     | 0.0020                   |           |             |                                              |          |             |      |          |      |
| Beryllium  | ND     | 0.0020                   |           |             |                                              |          |             |      |          |      |
| Cadmium    | ND     | 0.0020                   |           |             |                                              |          |             |      |          |      |
| Calcium    | ND     | 1.0                      |           |             |                                              |          |             |      |          |      |
| Chromium   | ND     | 0.0060                   |           |             |                                              |          |             |      |          |      |
| Cobalt     | ND     | 0.0060                   |           |             |                                              |          |             |      |          |      |
| Iron       | ND     | 0.020                    |           |             |                                              |          |             |      |          |      |
| Lead       | ND     | 0.0050                   |           |             |                                              |          |             |      |          |      |
| Magnesium  | ND     | 1.0                      |           |             |                                              |          |             |      |          |      |
| Manganese  | ND     | 0.0020                   |           |             |                                              |          |             |      |          |      |
| Nickel     | ND     | 0.010                    |           |             |                                              |          |             |      |          |      |
| Potassium  | ND     | 1.0                      |           |             |                                              |          |             |      |          |      |
| Selenium   | ND     | 0.050                    |           |             |                                              |          |             |      |          |      |
| Silver     | ND     | 0.0050                   |           |             |                                              |          |             |      |          |      |
| Sodium     | ND     | 1.0                      |           |             |                                              |          |             |      |          |      |
| Vanadium   | ND     | 0.050                    |           |             |                                              |          |             |      |          |      |
| Zinc       | ND     | 0.010                    |           |             |                                              |          |             |      |          |      |

|            |        |        |                          |             |                                              |          |             |      |          |      |
|------------|--------|--------|--------------------------|-------------|----------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS    |        | SampType: LCS            |             | TestCode: EPA Method 200.7: Dissolved Metals |          |             |      |          |      |
| Client ID: | LCSW   |        | Batch ID: R22295         |             | RunNo: 22295                                 |          |             |      |          |      |
| Prep Date: |        |        | Analysis Date: 11/3/2014 |             | SeqNo: 656889                                |          | Units: mg/L |      |          |      |
| Analyte    | Result | PQL    | SPK value                | SPK Ref Val | %REC                                         | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | 0.47   | 0.0020 | 0.5000                   | 0           | 93.7                                         | 85       | 115         |      |          |      |
| Beryllium  | 0.49   | 0.0020 | 0.5000                   | 0           | 97.4                                         | 85       | 115         |      |          |      |
| Cadmium    | 0.47   | 0.0020 | 0.5000                   | 0           | 94.5                                         | 85       | 115         |      |          |      |
| Calcium    | 49     | 1.0    | 50.00                    | 0           | 98.8                                         | 85       | 115         |      |          |      |
| Chromium   | 0.46   | 0.0060 | 0.5000                   | 0           | 92.1                                         | 85       | 115         |      |          |      |
| Cobalt     | 0.46   | 0.0060 | 0.5000                   | 0           | 91.4                                         | 85       | 115         |      |          |      |
| Iron       | 0.47   | 0.020  | 0.5000                   | 0           | 93.5                                         | 85       | 115         |      |          |      |
| Lead       | 0.47   | 0.0050 | 0.5000                   | 0           | 94.3                                         | 85       | 115         |      |          |      |
| Magnesium  | 49     | 1.0    | 50.00                    | 0           | 98.3                                         | 85       | 115         |      |          |      |
| Manganese  | 0.46   | 0.0020 | 0.5000                   | 0           | 91.2                                         | 85       | 115         |      |          |      |
| Nickel     | 0.45   | 0.010  | 0.5000                   | 0           | 90.9                                         | 85       | 115         |      |          |      |
| Potassium  | 47     | 1.0    | 50.00                    | 0           | 94.5                                         | 85       | 115         |      |          |      |
| Selenium   | 0.47   | 0.050  | 0.5000                   | 0           | 93.1                                         | 85       | 115         |      |          |      |
| Silver     | 0.098  | 0.0050 | 0.1000                   | 0           | 97.6                                         | 85       | 115         |      |          |      |
| Sodium     | 48     | 1.0    | 50.00                    | 0           | 96.3                                         | 85       | 115         |      |          |      |
| Vanadium   | 0.48   | 0.050  | 0.5000                   | 0           | 97.0                                         | 85       | 115         |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |        |       |                          |             |                                              |          |             |      |          |      |
|------------|--------|-------|--------------------------|-------------|----------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS    |       | SampType: LCS            |             | TestCode: EPA Method 200.7: Dissolved Metals |          |             |      |          |      |
| Client ID: | LCSW   |       | Batch ID: R22295         |             | RunNo: 22295                                 |          |             |      |          |      |
| Prep Date: |        |       | Analysis Date: 11/3/2014 |             | SeqNo: 656889                                |          | Units: mg/L |      |          |      |
| Analyte    | Result | PQL   | SPK value                | SPK Ref Val | %REC                                         | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Zinc       | 0.46   | 0.010 | 0.5000                   | 0           | 91.7                                         | 85       | 115         |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |        |                          |             |                                          |          |             |      |          |      |
|------------|-----------|--------|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB-16281  |        | SampType: MBLK           |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | PBW       |        | Batch ID: 16281          |             | RunNo: 22422                             |          |             |      |          |      |
| Prep Date: | 11/6/2014 |        | Analysis Date: 11/7/2014 |             | SeqNo: 660720                            |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL    | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Beryllium  | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Cadmium    | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Calcium    | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Chromium   | ND        | 0.0060 |                          |             |                                          |          |             |      |          |      |
| Cobalt     | ND        | 0.0060 |                          |             |                                          |          |             |      |          |      |
| Iron       | ND        | 0.020  |                          |             |                                          |          |             |      |          |      |
| Lead       | ND        | 0.0050 |                          |             |                                          |          |             |      |          |      |
| Magnesium  | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Manganese  | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Nickel     | ND        | 0.010  |                          |             |                                          |          |             |      |          |      |
| Potassium  | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Silver     | ND        | 0.0050 |                          |             |                                          |          |             |      |          |      |
| Sodium     | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Vanadium   | ND        | 0.050  |                          |             |                                          |          |             |      |          |      |
| Zinc       | ND        | 0.010  |                          |             |                                          |          |             |      |          |      |

|            |           |        |                          |             |                                          |          |             |      |          |      |
|------------|-----------|--------|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS-16281 |        | SampType: LCS            |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | LCSW      |        | Batch ID: 16281          |             | RunNo: 22422                             |          |             |      |          |      |
| Prep Date: | 11/6/2014 |        | Analysis Date: 11/7/2014 |             | SeqNo: 660721                            |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL    | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | 0.52      | 0.0020 | 0.5000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Beryllium  | 0.54      | 0.0020 | 0.5000                   | 0           | 107                                      | 85       | 115         |      |          |      |
| Cadmium    | 0.51      | 0.0020 | 0.5000                   | 0           | 103                                      | 85       | 115         |      |          |      |
| Calcium    | 52        | 1.0    | 50.00                    | 0           | 103                                      | 85       | 115         |      |          |      |
| Chromium   | 0.51      | 0.0060 | 0.5000                   | 0           | 102                                      | 85       | 115         |      |          |      |
| Cobalt     | 0.49      | 0.0060 | 0.5000                   | 0           | 98.6                                     | 85       | 115         |      |          |      |
| Iron       | 0.50      | 0.020  | 0.5000                   | 0           | 99.4                                     | 85       | 115         |      |          |      |
| Lead       | 0.51      | 0.0050 | 0.5000                   | 0           | 101                                      | 85       | 115         |      |          |      |
| Magnesium  | 51        | 1.0    | 50.00                    | 0           | 102                                      | 85       | 115         |      |          |      |
| Manganese  | 0.49      | 0.0020 | 0.5000                   | 0           | 99.0                                     | 85       | 115         |      |          |      |
| Nickel     | 0.50      | 0.010  | 0.5000                   | 0           | 101                                      | 85       | 115         |      |          |      |
| Potassium  | 49        | 1.0    | 50.00                    | 0           | 97.2                                     | 85       | 115         |      |          |      |
| Silver     | 0.11      | 0.0050 | 0.1000                   | 0           | 109                                      | 85       | 115         |      |          |      |
| Sodium     | 50        | 1.0    | 50.00                    | 0           | 100                                      | 85       | 115         |      |          |      |
| Vanadium   | 0.54      | 0.050  | 0.5000                   | 0           | 108                                      | 85       | 115         |      |          |      |
| Zinc       | 0.51      | 0.010  | 0.5000                   | 0           | 102                                      | 85       | 115         |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |             |        |                                  |             |                                              |          |                    |      |          |      |
|------------|-------------|--------|----------------------------------|-------------|----------------------------------------------|----------|--------------------|------|----------|------|
| Sample ID  | <b>LCS</b>  |        | SampType: <b>LCS</b>             |             | TestCode: <b>EPA 200.8: Dissolved Metals</b> |          |                    |      |          |      |
| Client ID: | <b>LCSW</b> |        | Batch ID: <b>R22504</b>          |             | RunNo: <b>22504</b>                          |          |                    |      |          |      |
| Prep Date: |             |        | Analysis Date: <b>11/12/2014</b> |             | SeqNo: <b>663792</b>                         |          | Units: <b>mg/L</b> |      |          |      |
| Analyte    | Result      | PQL    | SPK value                        | SPK Ref Val | %REC                                         | LowLimit | HighLimit          | %RPD | RPDLimit | Qual |
| Antimony   | 0.025       | 0.0010 | 0.02500                          | 0           | 98.3                                         | 85       | 115                |      |          |      |
| Arsenic    | 0.026       | 0.0010 | 0.02500                          | 0           | 104                                          | 85       | 115                |      |          |      |
| Selenium   | 0.025       | 0.0010 | 0.02500                          | 0           | 101                                          | 85       | 115                |      |          |      |

|            |             |        |                                  |             |                                              |          |                    |      |          |      |
|------------|-------------|--------|----------------------------------|-------------|----------------------------------------------|----------|--------------------|------|----------|------|
| Sample ID  | <b>LCS</b>  |        | SampType: <b>LCS</b>             |             | TestCode: <b>EPA 200.8: Dissolved Metals</b> |          |                    |      |          |      |
| Client ID: | <b>LCSW</b> |        | Batch ID: <b>R22504</b>          |             | RunNo: <b>22504</b>                          |          |                    |      |          |      |
| Prep Date: |             |        | Analysis Date: <b>11/12/2014</b> |             | SeqNo: <b>663793</b>                         |          | Units: <b>mg/L</b> |      |          |      |
| Analyte    | Result      | PQL    | SPK value                        | SPK Ref Val | %REC                                         | LowLimit | HighLimit          | %RPD | RPDLimit | Qual |
| Arsenic    | 0.025       | 0.0010 | 0.02500                          | 0           | 99.2                                         | 85       | 115                |      |          |      |
| Selenium   | 0.025       | 0.0010 | 0.02500                          | 0           | 101                                          | 85       | 115                |      |          |      |

|            |            |        |                                  |             |                                              |          |                    |      |          |      |
|------------|------------|--------|----------------------------------|-------------|----------------------------------------------|----------|--------------------|------|----------|------|
| Sample ID  | <b>MB</b>  |        | SampType: <b>MBLK</b>            |             | TestCode: <b>EPA 200.8: Dissolved Metals</b> |          |                    |      |          |      |
| Client ID: | <b>PBW</b> |        | Batch ID: <b>R22504</b>          |             | RunNo: <b>22504</b>                          |          |                    |      |          |      |
| Prep Date: |            |        | Analysis Date: <b>11/12/2014</b> |             | SeqNo: <b>663795</b>                         |          | Units: <b>mg/L</b> |      |          |      |
| Analyte    | Result     | PQL    | SPK value                        | SPK Ref Val | %REC                                         | LowLimit | HighLimit          | %RPD | RPDLimit | Qual |
| Antimony   | ND         | 0.0010 |                                  |             |                                              |          |                    |      |          |      |
| Arsenic    | ND         | 0.0010 |                                  |             |                                              |          |                    |      |          |      |
| Selenium   | ND         | 0.0010 |                                  |             |                                              |          |                    |      |          |      |

|            |            |        |                                  |             |                                              |          |                    |      |          |      |
|------------|------------|--------|----------------------------------|-------------|----------------------------------------------|----------|--------------------|------|----------|------|
| Sample ID  | <b>MB</b>  |        | SampType: <b>MBLK</b>            |             | TestCode: <b>EPA 200.8: Dissolved Metals</b> |          |                    |      |          |      |
| Client ID: | <b>PBW</b> |        | Batch ID: <b>R22504</b>          |             | RunNo: <b>22504</b>                          |          |                    |      |          |      |
| Prep Date: |            |        | Analysis Date: <b>11/12/2014</b> |             | SeqNo: <b>663798</b>                         |          | Units: <b>mg/L</b> |      |          |      |
| Analyte    | Result     | PQL    | SPK value                        | SPK Ref Val | %REC                                         | LowLimit | HighLimit          | %RPD | RPDLimit | Qual |
| Arsenic    | ND         | 0.0010 |                                  |             |                                              |          |                    |      |          |      |
| Selenium   | ND         | 0.0010 |                                  |             |                                              |          |                    |      |          |      |

### Qualifiers:

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S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |             |        |                           |             |                                    |          |             |      |          |      |
|------------|-------------|--------|---------------------------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LLLCS-16281 |        | SampType: LCSLL           |             | TestCode: 200.8 ICPMS Metals:Total |          |             |      |          |      |
| Client ID: | BatchQC     |        | Batch ID: 16281           |             | RunNo: 22466                       |          |             |      |          |      |
| Prep Date: | 11/6/2014   |        | Analysis Date: 11/11/2014 |             | SeqNo: 662217                      |          | Units: mg/L |      |          |      |
| Analyte    | Result      | PQL    | SPK value                 | SPK Ref Val | %REC                               | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Antimony   | 0.026       | 0.0010 | 0.02500                   | 0           | 105                                | 85       | 115         |      |          |      |
| Arsenic    | 0.024       | 0.0010 | 0.02500                   | 0           | 96.0                               | 85       | 115         |      |          |      |
| Selenium   | 0.023       | 0.0010 | 0.02500                   | 0           | 92.9                               | 85       | 115         |      |          |      |

|            |           |        |                           |             |                                    |          |             |      |          |      |
|------------|-----------|--------|---------------------------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB-16281  |        | SampType: MBLK            |             | TestCode: 200.8 ICPMS Metals:Total |          |             |      |          |      |
| Client ID: | PBW       |        | Batch ID: 16281           |             | RunNo: 22466                       |          |             |      |          |      |
| Prep Date: | 11/6/2014 |        | Analysis Date: 11/11/2014 |             | SeqNo: 662220                      |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL    | SPK value                 | SPK Ref Val | %REC                               | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Antimony   | ND        | 0.0010 |                           |             |                                    |          |             |      |          |      |
| Arsenic    | ND        | 0.0010 |                           |             |                                    |          |             |      |          |      |
| Selenium   | ND        | 0.0010 |                           |             |                                    |          |             |      |          |      |

### Qualifiers:

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |            |         |                           |             |                                     |          |             |      |          |      |
|------------|------------|---------|---------------------------|-------------|-------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB-16303   |         | SampType: MBLK            |             | TestCode: EPA Method 245.1: Mercury |          |             |      |          |      |
| Client ID: | PBW        |         | Batch ID: 16303           |             | RunNo: 22432                        |          |             |      |          |      |
| Prep Date: | 11/10/2014 |         | Analysis Date: 11/10/2014 |             | SeqNo: 661189                       |          | Units: mg/L |      |          |      |
| Analyte    | Result     | PQL     | SPK value                 | SPK Ref Val | %REC                                | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Mercurv    | ND         | 0.00020 |                           |             |                                     |          |             |      |          |      |

|            |            |         |                           |             |                                     |          |             |      |          |      |
|------------|------------|---------|---------------------------|-------------|-------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS-16303  |         | SampType: LCS             |             | TestCode: EPA Method 245.1: Mercury |          |             |      |          |      |
| Client ID: | LCSW       |         | Batch ID: 16303           |             | RunNo: 22432                        |          |             |      |          |      |
| Prep Date: | 11/10/2014 |         | Analysis Date: 11/10/2014 |             | SeqNo: 661190                       |          | Units: mg/L |      |          |      |
| Analyte    | Result     | PQL     | SPK value                 | SPK Ref Val | %REC                                | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Mercury    | 0.0050     | 0.00020 | 0.005000                  | 0           | 100                                 | 80       | 120         |      |          |      |

### Qualifiers:

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O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID <b>MB</b>      | SampType: <b>MBLK</b>           |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|--------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b>    | Batch ID: <b>R22290</b>         |      | RunNo: <b>22290</b>                       |             |                    |          |           |      |          |      |
| Prep Date:               | Analysis Date: <b>11/1/2014</b> |      | SeqNo: <b>656796</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                  | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride                 | ND                              | 0.50 |                                           |             |                    |          |           |      |          |      |
| Nitrogen, Nitrite (As N) | ND                              | 0.10 |                                           |             |                    |          |           |      |          |      |
| Nitrogen, Nitrate (As N) | ND                              | 0.10 |                                           |             |                    |          |           |      |          |      |
| Sulfate                  | ND                              | 0.50 |                                           |             |                    |          |           |      |          |      |

| Sample ID <b>LCS</b>     | SampType: <b>LCS</b>            |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|--------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>LCSW</b>   | Batch ID: <b>R22290</b>         |      | RunNo: <b>22290</b>                       |             |                    |          |           |      |          |      |
| Prep Date:               | Analysis Date: <b>11/1/2014</b> |      | SeqNo: <b>656797</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                  | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride                 | 4.7                             | 0.50 | 5.000                                     | 0           | 93.9               | 90       | 110       |      |          |      |
| Nitrogen, Nitrite (As N) | 0.97                            | 0.10 | 1.000                                     | 0           | 97.5               | 90       | 110       |      |          |      |
| Nitrogen, Nitrate (As N) | 2.5                             | 0.10 | 2.500                                     | 0           | 98.4               | 90       | 110       |      |          |      |
| Sulfate                  | 9.8                             | 0.50 | 10.00                                     | 0           | 97.7               | 90       | 110       |      |          |      |

| Sample ID <b>1410E28-001CMS</b> | SampType: <b>MS</b>             |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|---------------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>MW-71</b>         | Batch ID: <b>R22290</b>         |      | RunNo: <b>22290</b>                       |             |                    |          |           |      |          |      |
| Prep Date:                      | Analysis Date: <b>11/1/2014</b> |      | SeqNo: <b>656799</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                         | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Nitrogen, Nitrite (As N)        | 4.7                             | 0.50 | 5.000                                     | 0           | 93.3               | 75.5     | 104       |      |          |      |
| Nitrogen, Nitrate (As N)        | 12                              | 0.50 | 12.50                                     | 0           | 96.7               | 87.8     | 111       |      |          |      |
| Sulfate                         | 190                             | 2.5  | 50.00                                     | 131.2       | 112                | 90.4     | 111       |      |          | S    |

| Sample ID <b>1410E28-001CMSD</b> | SampType: <b>MSD</b>            |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |       |          |      |
|----------------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|-------|----------|------|
| Client ID: <b>MW-71</b>          | Batch ID: <b>R22290</b>         |      | RunNo: <b>22290</b>                       |             |                    |          |           |       |          |      |
| Prep Date:                       | Analysis Date: <b>11/1/2014</b> |      | SeqNo: <b>656800</b>                      |             | Units: <b>mg/L</b> |          |           |       |          |      |
| Analyte                          | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD  | RPDLimit | Qual |
| Nitrogen, Nitrite (As N)         | 4.6                             | 0.50 | 5.000                                     | 0           | 93.0               | 75.5     | 104       | 0.354 | 20       |      |
| Nitrogen, Nitrate (As N)         | 12                              | 0.50 | 12.50                                     | 0           | 96.4               | 87.8     | 111       | 0.377 | 20       |      |
| Sulfate                          | 190                             | 2.5  | 50.00                                     | 131.2       | 109                | 90.4     | 111       | 0.754 | 20       |      |

| Sample ID <b>MB</b>   | SampType: <b>MBLK</b>            |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|-----------------------|----------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b> | Batch ID: <b>R22517</b>          |      | RunNo: <b>22517</b>                       |             |                    |          |           |      |          |      |
| Prep Date:            | Analysis Date: <b>11/12/2014</b> |      | SeqNo: <b>664040</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte               | Result                           | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride              | ND                               | 0.50 |                                           |             |                    |          |           |      |          |      |

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- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |        |      |                           |             |      |                                    |           |             |          |      |  |
|------------|--------|------|---------------------------|-------------|------|------------------------------------|-----------|-------------|----------|------|--|
| Sample ID  | LCS    |      | SampType: LCS             |             |      | TestCode: EPA Method 300.0: Anions |           |             |          |      |  |
| Client ID: | LCSW   |      | Batch ID: R22517          |             |      | RunNo: 22517                       |           |             |          |      |  |
| Prep Date: |        |      | Analysis Date: 11/12/2014 |             |      | SeqNo: 664041                      |           | Units: mg/L |          |      |  |
| Analyte    | Result | PQL  | SPK value                 | SPK Ref Val | %REC | LowLimit                           | HighLimit | %RPD        | RPDLimit | Qual |  |
| Chloride   | 5.0    | 0.50 | 5.000                     | 0           | 99.9 | 90                                 | 110       |             |          |      |  |

### Qualifiers:

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RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                               |        |       |                          |             |                                            |          |             |      |          |      |
|-------------------------------|--------|-------|--------------------------|-------------|--------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                     | 5ML RB |       | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID:                    | PBW    |       | Batch ID: R22308         |             | RunNo: 22308                               |          |             |      |          |      |
| Prep Date:                    |        |       | Analysis Date: 11/3/2014 |             | SeqNo: 657239                              |          | Units: mg/L |      |          |      |
| Analyte                       | Result | PQL   | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND     | 0.050 |                          |             |                                            |          |             |      |          |      |
| Surr: BFB                     | 18     |       | 20.00                    |             | 92.0                                       | 80       | 120         |      |          |      |

|                               |               |                          |           |             |                                            |          |             |      |          |      |
|-------------------------------|---------------|--------------------------|-----------|-------------|--------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS | SampType: LCS            |           |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID:                    | LCSW          | Batch ID: R22308         |           |             | RunNo: 22308                               |          |             |      |          |      |
| Prep Date:                    |               | Analysis Date: 11/3/2014 |           |             | SeqNo: 657240                              |          | Units: mg/L |      |          |      |
| Analyte                       | Result        | PQL                      | SPK value | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.55          | 0.050                    | 0.5000    | 0           | 110                                        | 80       | 120         |      |          |      |
| Surr: BFB                     | 20            |                          | 20.00     |             | 99.5                                       | 80       | 120         |      |          |      |

|                               |                |     |                          |             |                                            |          |             |      |          |      |
|-------------------------------|----------------|-----|--------------------------|-------------|--------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                     | 1410E28-001BMS |     | SampType: MS             |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID:                    | MW-71          |     | Batch ID: R22308         |             | RunNo: 22308                               |          |             |      |          |      |
| Prep Date:                    |                |     | Analysis Date: 11/3/2014 |             | SeqNo: 657244                              |          | Units: mg/L |      |          |      |
| Analyte                       | Result         | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 160            | 2.5 | 25.00                    | 127.4       | 121                                        | 70.4     | 127         |      |          |      |
| Surr: BFB                     | 1200           |     | 1000                     |             | 116                                        | 80       | 120         |      |          |      |

|                               |                 |     |                          |             |                                            |          |             |      |          |      |
|-------------------------------|-----------------|-----|--------------------------|-------------|--------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                     | 1410E28-001BMSD |     | SampType: MSD            |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID:                    | MW-71           |     | Batch ID: R22308         |             | RunNo: 22308                               |          |             |      |          |      |
| Prep Date:                    |                 |     | Analysis Date: 11/3/2014 |             | SeqNo: 657245                              |          | Units: mg/L |      |          |      |
| Analyte                       | Result          | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 150             | 2.5 | 25.00                    | 127.4       | 81.2                                       | 70.4     | 127         | 6.53 | 20       |      |
| Surr: BFB                     | 1100            |     | 1000                     |             | 111                                        | 80       | 120         | 0    | 0        |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |        |                           |           |             |                                       |             |           |      |          |      |
|--------------------------------|--------|---------------------------|-----------|-------------|---------------------------------------|-------------|-----------|------|----------|------|
| Sample ID                      | 5ml rb | SampType: MBLK            |           |             | TestCode: EPA Method 8260B: VOLATILES |             |           |      |          |      |
| Client ID:                     | PBW    | Batch ID: R22448          |           |             | RunNo: 22448                          |             |           |      |          |      |
| Prep Date:                     |        | Analysis Date: 11/10/2014 |           |             | SeqNo: 661480                         | Units: µg/L |           |      |          |      |
| Analyte                        | Result | PQL                       | SPK value | SPK Ref Val | %REC                                  | LowLimit    | HighLimit | %RPD | RPDLimit | Qual |
| Benzene                        | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Toluene                        | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Ethylbenzene                   | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,2,4-Trimethylbenzene         | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,3,5-Trimethylbenzene         | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Naphthalene                    | ND     | 2.0                       |           |             |                                       |             |           |      |          |      |
| 1-Methylnaphthalene            | ND     | 4.0                       |           |             |                                       |             |           |      |          |      |
| 2-Methylnaphthalene            | ND     | 4.0                       |           |             |                                       |             |           |      |          |      |
| Acetone                        | ND     | 10                        |           |             |                                       |             |           |      |          |      |
| Bromobenzene                   | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Bromodichloromethane           | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Bromoform                      | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Bromomethane                   | ND     | 3.0                       |           |             |                                       |             |           |      |          |      |
| 2-Butanone                     | ND     | 10                        |           |             |                                       |             |           |      |          |      |
| Carbon disulfide               | ND     | 10                        |           |             |                                       |             |           |      |          |      |
| Carbon Tetrachloride           | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Chlorobenzene                  | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Chloroethane                   | ND     | 2.0                       |           |             |                                       |             |           |      |          |      |
| Chloroform                     | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Chloromethane                  | ND     | 3.0                       |           |             |                                       |             |           |      |          |      |
| 2-Chlorotoluene                | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 4-Chlorotoluene                | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| cis-1,2-DCE                    | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| cis-1,3-Dichloropropene        | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND     | 2.0                       |           |             |                                       |             |           |      |          |      |
| Dibromochloromethane           | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Dibromomethane                 | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,2-Dichlorobenzene            | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,3-Dichlorobenzene            | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,4-Dichlorobenzene            | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| Dichlorodifluoromethane        | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,1-Dichloroethane             | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,1-Dichloroethene             | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,2-Dichloropropane            | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 1,3-Dichloropropane            | ND     | 1.0                       |           |             |                                       |             |           |      |          |      |
| 2,2-Dichloropropane            | ND     | 2.0                       |           |             |                                       |             |           |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |                |            |             |                             |          |           |      |          |      |
|-----------------------------|--------|----------------|------------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                   | 5ml rb | SampType:      | MBLK       | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:                  | PBW    | Batch ID:      | R22448     | RunNo:      | 22448                       |          |           |      |          |      |
| Prep Date:                  |        | Analysis Date: | 11/10/2014 | SeqNo:      | 661480                      | Units:   | µg/L      |      |          |      |
| Analyte                     | Result | PQL            | SPK value  | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1-Dichloropropene         | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Hexachlorobutadiene         | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 2-Hexanone                  | ND     | 10             |            |             |                             |          |           |      |          |      |
| Isopropylbenzene            | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 4-Isopropyltoluene          | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 4-Methyl-2-pentanone        | ND     | 10             |            |             |                             |          |           |      |          |      |
| Methylene Chloride          | ND     | 3.0            |            |             |                             |          |           |      |          |      |
| n-Butylbenzene              | ND     | 3.0            |            |             |                             |          |           |      |          |      |
| n-Propylbenzene             | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| sec-Butylbenzene            | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Styrene                     | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| tert-Butylbenzene           | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND     | 2.0            |            |             |                             |          |           |      |          |      |
| Tetrachloroethene (PCE)     | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| trans-1,2-DCE               | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| trans-1,3-Dichloropropene   | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,2,3-Trichlorobenzene      | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,2,4-Trichlorobenzene      | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,1,1-Trichloroethane       | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,1,2-Trichloroethane       | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Trichloroethene (TCE)       | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Trichlorofluoromethane      | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,2,3-Trichloropropane      | ND     | 2.0            |            |             |                             |          |           |      |          |      |
| Vinyl chloride              | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Xylenes, Total              | ND     | 1.5            |            |             |                             |          |           |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 8.4    |                | 10.00      |             | 84.5                        | 70       | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene  | 10     |                | 10.00      |             | 100                         | 70       | 130       |      |          |      |
| Surr: Dibromofluoromethane  | 8.9    |                | 10.00      |             | 88.8                        | 70       | 130       |      |          |      |
| Surr: Toluene-d8            | 9.5    |                | 10.00      |             | 94.6                        | 70       | 130       |      |          |      |

|               |           |                |            |             |                             |          |           |      |          |      |
|---------------|-----------|----------------|------------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID     | 100ng lcs | SampType:      | LCS        | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:    | LCSW      | Batch ID:      | R22448     | RunNo:      | 22448                       |          |           |      |          |      |
| Prep Date:    |           | Analysis Date: | 11/10/2014 | SeqNo:      | 661648                      | Units:   | µg/L      |      |          |      |
| Analyte       | Result    | PQL            | SPK value  | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene       | 20        | 1.0            | 20.00      | 0           | 100                         | 70       | 130       |      |          |      |
| Toluene       | 21        | 1.0            | 20.00      | 0           | 105                         | 80       | 120       |      |          |      |
| Chlorobenzene | 19        | 1.0            | 20.00      | 0           | 92.9                        | 70       | 130       |      |          |      |

### Qualifiers:

|   |                                                 |    |                                                    |
|---|-------------------------------------------------|----|----------------------------------------------------|
| * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
| E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
| O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
| R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
| S | Spike Recovery outside accepted recovery limits |    |                                                    |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |     |                           |             |      |                                       |           |             |          |      |
|-----------------------------|-----------|-----|---------------------------|-------------|------|---------------------------------------|-----------|-------------|----------|------|
| Sample ID                   | 100ng lcs |     | SampType: LCS             |             |      | TestCode: EPA Method 8260B: VOLATILES |           |             |          |      |
| Client ID:                  | LCSW      |     | Batch ID: R22448          |             |      | RunNo: 22448                          |           |             |          |      |
| Prep Date:                  |           |     | Analysis Date: 11/10/2014 |             |      | SeqNo: 661648                         |           | Units: µg/L |          |      |
| Analyte                     | Result    | PQL | SPK value                 | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD        | RPDLimit | Qual |
| 1,1-Dichloroethene          | 21        | 1.0 | 20.00                     | 0           | 104  | 82.6                                  | 131       |             |          |      |
| Trichloroethene (TCE)       | 18        | 1.0 | 20.00                     | 0           | 91.8 | 70                                    | 130       |             |          |      |
| Surr: 1,2-Dichloroethane-d4 | 8.6       |     | 10.00                     |             | 85.6 | 70                                    | 130       |             |          |      |
| Surr: 4-Bromofluorobenzene  | 9.3       |     | 10.00                     |             | 93.3 | 70                                    | 130       |             |          |      |
| Surr: Dibromofluoromethane  | 8.8       |     | 10.00                     |             | 87.7 | 70                                    | 130       |             |          |      |
| Surr: Toluene-d8            | 9.4       |     | 10.00                     |             | 93.6 | 70                                    | 130       |             |          |      |

|                             |                |     |                           |             |      |                                       |           |             |          |      |
|-----------------------------|----------------|-----|---------------------------|-------------|------|---------------------------------------|-----------|-------------|----------|------|
| Sample ID                   | 1410E28-001AMS |     | SampType: MS              |             |      | TestCode: EPA Method 8260B: VOLATILES |           |             |          |      |
| Client ID:                  | MW-71          |     | Batch ID: R22448          |             |      | RunNo: 22448                          |           |             |          |      |
| Prep Date:                  |                |     | Analysis Date: 11/10/2014 |             |      | SeqNo: 661652                         |           | Units: µg/L |          |      |
| Analyte                     | Result         | PQL | SPK value                 | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD        | RPDLimit | Qual |
| Benzene                     | 17000          | 50  | 1000                      | 16430       | 75.6 | 70                                    | 130       |             |          | E    |
| Toluene                     | 14000          | 50  | 1000                      | 12050       | 224  | 70                                    | 130       |             |          | ES   |
| Chlorobenzene               | 1000           | 50  | 1000                      | 0           | 101  | 70                                    | 130       |             |          |      |
| 1,1-Dichloroethene          | 1000           | 50  | 1000                      | 0           | 104  | 70                                    | 130       |             |          |      |
| Trichloroethene (TCE)       | 900            | 50  | 1000                      | 0           | 90.0 | 70                                    | 130       |             |          |      |
| Surr: 1,2-Dichloroethane-d4 | 420            |     | 500.0                     |             | 83.3 | 70                                    | 130       |             |          |      |
| Surr: 4-Bromofluorobenzene  | 460            |     | 500.0                     |             | 91.4 | 70                                    | 130       |             |          |      |
| Surr: Dibromofluoromethane  | 410            |     | 500.0                     |             | 82.4 | 70                                    | 130       |             |          |      |
| Surr: Toluene-d8            | 500            |     | 500.0                     |             | 99.6 | 70                                    | 130       |             |          |      |

|                             |                 |     |                           |             |      |                                       |           |             |          |      |
|-----------------------------|-----------------|-----|---------------------------|-------------|------|---------------------------------------|-----------|-------------|----------|------|
| Sample ID                   | 1410E28-001AMSD |     | SampType: MSD             |             |      | TestCode: EPA Method 8260B: VOLATILES |           |             |          |      |
| Client ID:                  | MW-71           |     | Batch ID: R22448          |             |      | RunNo: 22448                          |           |             |          |      |
| Prep Date:                  |                 |     | Analysis Date: 11/10/2014 |             |      | SeqNo: 661653                         |           | Units: µg/L |          |      |
| Analyte                     | Result          | PQL | SPK value                 | SPK Ref Val | %REC | LowLimit                              | HighLimit | %RPD        | RPDLimit | Qual |
| Benzene                     | 18000           | 50  | 1000                      | 16430       | 180  | 70                                    | 130       | 5.88        | 20       | ES   |
| Toluene                     | 14000           | 50  | 1000                      | 12050       | 184  | 70                                    | 130       | 2.89        | 20       | ES   |
| Chlorobenzene               | 1000            | 50  | 1000                      | 0           | 101  | 70                                    | 130       | 0.704       | 20       |      |
| 1,1-Dichloroethene          | 1100            | 50  | 1000                      | 0           | 114  | 70                                    | 130       | 9.58        | 20       |      |
| Trichloroethene (TCE)       | 950             | 50  | 1000                      | 0           | 95.2 | 70                                    | 130       | 5.60        | 20       |      |
| Surr: 1,2-Dichloroethane-d4 | 440             |     | 500.0                     |             | 88.3 | 70                                    | 130       | 0           | 0        |      |
| Surr: 4-Bromofluorobenzene  | 440             |     | 500.0                     |             | 87.2 | 70                                    | 130       | 0           | 0        |      |
| Surr: Dibromofluoromethane  | 440             |     | 500.0                     |             | 87.9 | 70                                    | 130       | 0           | 0        |      |
| Surr: Toluene-d8            | 500             |     | 500.0                     |             | 100  | 70                                    | 130       | 0           | 0        |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |        |                |            |             |                             |          |           |      |          |      |
|--------------------------------|--------|----------------|------------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                      | b5     | SampType:      | MBLK       | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:                     | PBW    | Batch ID:      | R22481     | RunNo:      | 22481                       |          |           |      |          |      |
| Prep Date:                     |        | Analysis Date: | 11/11/2014 | SeqNo:      | 662755                      | Units:   | µg/L      |      |          |      |
| Analyte                        | Result | PQL            | SPK value  | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Toluene                        | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Ethylbenzene                   | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,2,4-Trimethylbenzene         | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,3,5-Trimethylbenzene         | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Naphthalene                    | ND     | 2.0            |            |             |                             |          |           |      |          |      |
| 1-Methylnaphthalene            | ND     | 4.0            |            |             |                             |          |           |      |          |      |
| 2-Methylnaphthalene            | ND     | 4.0            |            |             |                             |          |           |      |          |      |
| Acetone                        | ND     | 10             |            |             |                             |          |           |      |          |      |
| Bromobenzene                   | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Bromodichloromethane           | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Bromoform                      | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Bromomethane                   | ND     | 3.0            |            |             |                             |          |           |      |          |      |
| 2-Butanone                     | ND     | 10             |            |             |                             |          |           |      |          |      |
| Carbon disulfide               | ND     | 10             |            |             |                             |          |           |      |          |      |
| Carbon Tetrachloride           | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Chlorobenzene                  | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Chloroethane                   | ND     | 2.0            |            |             |                             |          |           |      |          |      |
| Chloroform                     | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Chloromethane                  | ND     | 3.0            |            |             |                             |          |           |      |          |      |
| 2-Chlorotoluene                | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 4-Chlorotoluene                | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| cis-1,2-DCE                    | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| cis-1,3-Dichloropropene        | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND     | 2.0            |            |             |                             |          |           |      |          |      |
| Dibromochloromethane           | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Dibromomethane                 | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,2-Dichlorobenzene            | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,3-Dichlorobenzene            | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,4-Dichlorobenzene            | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| Dichlorodifluoromethane        | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,1-Dichloroethane             | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,1-Dichloroethene             | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,2-Dichloropropane            | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 1,3-Dichloropropane            | ND     | 1.0            |            |             |                             |          |           |      |          |      |
| 2,2-Dichloropropane            | ND     | 2.0            |            |             |                             |          |           |      |          |      |
| 1,1-Dichloropropene            | ND     | 1.0            |            |             |                             |          |           |      |          |      |

### Qualifiers:

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E Value above quantitation range  
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O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

| Sample ID <b>b5</b>         | SampType: <b>MBLK</b>            |     |           | TestCode: <b>EPA Method 8260B: VOLATILES</b> |      |                    |           |      |          |      |
|-----------------------------|----------------------------------|-----|-----------|----------------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: <b>PBW</b>       | Batch ID: <b>R22481</b>          |     |           | RunNo: <b>22481</b>                          |      |                    |           |      |          |      |
| Prep Date:                  | Analysis Date: <b>11/11/2014</b> |     |           | SeqNo: <b>662755</b>                         |      | Units: <b>µg/L</b> |           |      |          |      |
| Analyte                     | Result                           | PQL | SPK value | SPK Ref Val                                  | %REC | LowLimit           | HighLimit | %RPD | RPDLimit | Qual |
| Hexachlorobutadiene         | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| 2-Hexanone                  | ND                               | 10  |           |                                              |      |                    |           |      |          |      |
| Isopropylbenzene            | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| 4-Isopropyltoluene          | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| 4-Methyl-2-pentanone        | ND                               | 10  |           |                                              |      |                    |           |      |          |      |
| Methylene Chloride          | ND                               | 3.0 |           |                                              |      |                    |           |      |          |      |
| n-Butylbenzene              | ND                               | 3.0 |           |                                              |      |                    |           |      |          |      |
| n-Propylbenzene             | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| sec-Butylbenzene            | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| Styrene                     | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| tert-Butylbenzene           | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND                               | 2.0 |           |                                              |      |                    |           |      |          |      |
| Tetrachloroethene (PCE)     | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| trans-1,2-DCE               | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| trans-1,3-Dichloropropene   | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| 1,2,3-Trichlorobenzene      | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| 1,2,4-Trichlorobenzene      | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| 1,1,1-Trichloroethane       | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| 1,1,2-Trichloroethane       | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| Trichloroethene (TCE)       | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| Trichlorofluoromethane      | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| 1,2,3-Trichloropropane      | ND                               | 2.0 |           |                                              |      |                    |           |      |          |      |
| Vinyl chloride              | ND                               | 1.0 |           |                                              |      |                    |           |      |          |      |
| Xylenes, Total              | ND                               | 1.5 |           |                                              |      |                    |           |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 9.2                              |     | 10.00     |                                              | 91.9 | 70                 | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene  | 7.8                              |     | 10.00     |                                              | 77.6 | 70                 | 130       |      |          |      |
| Surr: Dibromofluoromethane  | 9.4                              |     | 10.00     |                                              | 94.0 | 70                 | 130       |      |          |      |
| Surr: Toluene-d8            | 9.6                              |     | 10.00     |                                              | 96.0 | 70                 | 130       |      |          |      |

| Sample ID <b>100ng lcs</b> | SampType: <b>LCS</b>             |     |           | TestCode: <b>EPA Method 8260B: VOLATILES</b> |      |                    |           |      |          |      |
|----------------------------|----------------------------------|-----|-----------|----------------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: <b>LCSW</b>     | Batch ID: <b>R22481</b>          |     |           | RunNo: <b>22481</b>                          |      |                    |           |      |          |      |
| Prep Date:                 | Analysis Date: <b>11/11/2014</b> |     |           | SeqNo: <b>662757</b>                         |      | Units: <b>µg/L</b> |           |      |          |      |
| Analyte                    | Result                           | PQL | SPK value | SPK Ref Val                                  | %REC | LowLimit           | HighLimit | %RPD | RPDLimit | Qual |
| Toluene                    | 21                               | 1.0 | 20.00     | 0                                            | 105  | 80                 | 120       |      |          |      |
| Chlorobenzene              | 19                               | 1.0 | 20.00     | 0                                            | 94.4 | 70                 | 130       |      |          |      |
| 1,1-Dichloroethene         | 23                               | 1.0 | 20.00     | 0                                            | 117  | 82.6               | 131       |      |          |      |
| Trichloroethene (TCE)      | 20                               | 1.0 | 20.00     | 0                                            | 97.5 | 70                 | 130       |      |          |      |

### Qualifiers:

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O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |                |            |             |                             |          |           |      |          |      |
|-----------------------------|-----------|----------------|------------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                   | 100ng lcs | SampType:      | LCS        | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:                  | LCSW      | Batch ID:      | R22481     | RunNo:      | 22481                       |          |           |      |          |      |
| Prep Date:                  |           | Analysis Date: | 11/11/2014 | SeqNo:      | 662757                      | Units:   | µg/L      |      |          |      |
| Analyte                     | Result    | PQL            | SPK value  | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 1,2-Dichloroethane-d4 | 8.6       |                | 10.00      |             | 86.4                        | 70       | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene  | 8.1       |                | 10.00      |             | 80.6                        | 70       | 130       |      |          |      |
| Surr: Dibromofluoromethane  | 9.1       |                | 10.00      |             | 90.6                        | 70       | 130       |      |          |      |
| Surr: Toluene-d8            | 9.0       |                | 10.00      |             | 90.5                        | 70       | 130       |      |          |      |

### Qualifiers:

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |     |                                 |             |                                                  |          |                    |      |          |      |
|-----------------------------|------------------|-----|---------------------------------|-------------|--------------------------------------------------|----------|--------------------|------|----------|------|
| Sample ID                   | <b>MB-16261</b>  |     | SampType: <b>MBLK</b>           |             | TestCode: <b>EPA Method 8270C: Semivolatiles</b> |          |                    |      |          |      |
| Client ID:                  | <b>PBW</b>       |     | Batch ID: <b>16261</b>          |             | RunNo: <b>22395</b>                              |          |                    |      |          |      |
| Prep Date:                  | <b>11/6/2014</b> |     | Analysis Date: <b>11/6/2014</b> |             | SeqNo: <b>660059</b>                             |          | Units: <b>µg/L</b> |      |          |      |
| Analyte                     | Result           | PQL | SPK value                       | SPK Ref Val | %REC                                             | LowLimit | HighLimit          | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Acenaphthylene              | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Aniline                     | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Anthracene                  | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Azobenzene                  | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Benz(a)anthracene           | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Benzo(a)pyrene              | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Benzo(b)fluoranthene        | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Benzo(g,h,i)perylene        | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Benzo(k)fluoranthene        | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Benzoic acid                | ND               | 20  |                                 |             |                                                  |          |                    |      |          |      |
| Benzyl alcohol              | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Bis(2-chloroethoxy)methane  | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Bis(2-chloroethyl)ether     | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Bis(2-chloroisopropyl)ether | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Bis(2-ethylhexyl)phthalate  | 13               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 4-Bromophenyl phenyl ether  | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Butyl benzyl phthalate      | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Carbazole                   | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 4-Chloro-3-methylphenol     | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 4-Chloroaniline             | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 2-Chloronaphthalene         | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 2-Chlorophenol              | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 4-Chlorophenyl phenyl ether | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Chrysene                    | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Di-n-butyl phthalate        | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Di-n-octyl phthalate        | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Dibenz(a,h)anthracene       | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Dibenzofuran                | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 1,2-Dichlorobenzene         | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 1,3-Dichlorobenzene         | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 1,4-Dichlorobenzene         | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 3,3'-Dichlorobenzidine      | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Diethyl phthalate           | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| Dimethyl phthalate          | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 2,4-Dichlorophenol          | ND               | 20  |                                 |             |                                                  |          |                    |      |          |      |
| 2,4-Dimethylphenol          | ND               | 10  |                                 |             |                                                  |          |                    |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND               | 20  |                                 |             |                                                  |          |                    |      |          |      |
| 2,4-Dinitrophenol           | ND               | 20  |                                 |             |                                                  |          |                    |      |          |      |

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RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |     |                          |             |                                           |          |             |      |          |      |
|----------------------------|-----------|-----|--------------------------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | MB-16261  |     | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                 | PBW       |     | Batch ID: 16261          |             | RunNo: 22395                              |          |             |      |          |      |
| Prep Date:                 | 11/6/2014 |     | Analysis Date: 11/6/2014 |             | SeqNo: 660059                             |          | Units: µg/L |      |          |      |
| Analyte                    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Fluoranthene               | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Fluorene                   | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Hexachlorobenzene          | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Hexachlorobutadiene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Hexachloroethane           | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Isophorone                 | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 1-Methylnaphthalene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2-Methylnaphthalene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2-Methylphenol             | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 3+4-Methylphenol           | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| N-Nitrosodimethylamine     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Naphthalene                | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2-Nitroaniline             | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 3-Nitroaniline             | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Nitroaniline             | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Nitrobenzene               | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2-Nitrophenol              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Nitrophenol              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Pentachlorophenol          | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| Phenanthrene               | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Phenol                     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Pyrene                     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Pyridine                   | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Surr: 2-Fluorophenol       | 110       |     | 200.0                    |             | 55.0                                      | 17.6     | 104         |      |          |      |
| Surr: Phenol-d5            | 110       |     | 200.0                    |             | 54.8                                      | 17.7     | 89.9        |      |          |      |
| Surr: 2,4,6-Tribromophenol | 130       |     | 200.0                    |             | 64.0                                      | 16.3     | 122         |      |          |      |
| Surr: Nitrobenzene-d5      | 79        |     | 100.0                    |             | 78.6                                      | 45.3     | 117         |      |          |      |
| Surr: 2-Fluorobiphenyl     | 77        |     | 100.0                    |             | 77.4                                      | 43       | 113         |      |          |      |
| Surr: 4-Terphenyl-d14      | 91        |     | 100.0                    |             | 90.9                                      | 47.6     | 122         |      |          |      |

### Qualifiers:

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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
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P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |     |                          |             |                                           |          |             |      |          |      |
|----------------------------|-----------|-----|--------------------------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | LCS-16261 |     | SampType: LCS            |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                 | LCSW      |     | Batch ID: 16261          |             | RunNo: 22395                              |          |             |      |          |      |
| Prep Date:                 | 11/6/2014 |     | Analysis Date: 11/6/2014 |             | SeqNo: 660060                             |          | Units: µg/L |      |          |      |
| Analyte                    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Acenaphthene               | 72        | 10  | 100.0                    | 0           | 71.6                                      | 47.9     | 114         |      |          |      |
| 4-Chloro-3-methylphenol    | 160       | 10  | 200.0                    | 0           | 80.9                                      | 51.7     | 122         |      |          |      |
| 2-Chlorophenol             | 140       | 10  | 200.0                    | 0           | 67.9                                      | 40.7     | 113         |      |          |      |
| 1,4-Dichlorobenzene        | 56        | 10  | 100.0                    | 0           | 56.3                                      | 39.6     | 99.9        |      |          |      |
| 2,4-Dinitrotoluene         | 63        | 10  | 100.0                    | 0           | 62.5                                      | 40.8     | 113         |      |          |      |
| N-Nitrosodi-n-propylamine  | 71        | 10  | 100.0                    | 0           | 71.4                                      | 51.2     | 111         |      |          |      |
| 4-Nitrophenol              | 120       | 10  | 200.0                    | 0           | 59.6                                      | 15.7     | 86.9        |      |          |      |
| Pentachlorophenol          | 93        | 20  | 200.0                    | 0           | 46.3                                      | 21.6     | 104         |      |          |      |
| Phenol                     | 110       | 10  | 200.0                    | 0           | 57.5                                      | 28.6     | 71.7        |      |          |      |
| Pyrene                     | 74        | 10  | 100.0                    | 0           | 73.5                                      | 54.2     | 128         |      |          |      |
| 1,2,4-Trichlorobenzene     | 61        | 10  | 100.0                    | 0           | 61.3                                      | 40.9     | 101         |      |          |      |
| Surr: 2-Fluorophenol       | 110       |     | 200.0                    |             | 55.6                                      | 17.6     | 104         |      |          |      |
| Surr: Phenol-d5            | 98        |     | 200.0                    |             | 49.0                                      | 17.7     | 89.9        |      |          |      |
| Surr: 2,4,6-Tribromophenol | 160       |     | 200.0                    |             | 79.7                                      | 16.3     | 122         |      |          |      |
| Surr: Nitrobenzene-d5      | 72        |     | 100.0                    |             | 72.5                                      | 45.3     | 117         |      |          |      |
| Surr: 2-Fluorobiphenyl     | 70        |     | 100.0                    |             | 69.7                                      | 43       | 113         |      |          |      |
| Surr: 4-Terphenyl-d14      | 90        |     | 100.0                    |             | 89.9                                      | 47.6     | 122         |      |          |      |

|                            |                |                          |           |             |                                           |          |             |      |          |      |
|----------------------------|----------------|--------------------------|-----------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | 1410E28-001GMS | SampType: MS             |           |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                 | MW-71          | Batch ID: 16261          |           |             | RunNo: 22395                              |          |             |      |          |      |
| Prep Date:                 | 11/6/2014      | Analysis Date: 11/6/2014 |           |             | SeqNo: 660065                             |          | Units: µg/L |      |          |      |
| Analyte                    | Result         | PQL                      | SPK value | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Acenaphthene               | 76             | 10                       | 100.0     | 0           | 76.3                                      | 52.5     | 94.5        |      |          |      |
| 4-Chloro-3-methylphenol    | 150            | 10                       | 200.0     | 0           | 76.1                                      | 45       | 103         |      |          |      |
| 2-Chlorophenol             | 150            | 10                       | 200.0     | 0           | 73.6                                      | 32.3     | 101         |      |          |      |
| 1,4-Dichlorobenzene        | 60             | 10                       | 100.0     | 0           | 60.2                                      | 34.5     | 97.5        |      |          |      |
| 2,4-Dinitrotoluene         | 58             | 10                       | 100.0     | 0           | 58.1                                      | 20.1     | 123         |      |          |      |
| N-Nitrosodi-n-propylamine  | ND             | 10                       | 100.0     | 0           | 0                                         | 26.9     | 131         |      |          | S    |
| 4-Nitrophenol              | 140            | 10                       | 200.0     | 27.26       | 58.6                                      | 11.6     | 55.4        |      |          | S    |
| Pentachlorophenol          | 110            | 20                       | 200.0     | 5.120       | 54.2                                      | 17.6     | 88.9        |      |          |      |
| Phenol                     | 28             | 10                       | 200.0     | 0           | 14.0                                      | 18.4     | 66.5        |      |          | S    |
| Pyrene                     | 76             | 10                       | 100.0     | 4.200       | 72.0                                      | 43.1     | 111         |      |          |      |
| 1,2,4-Trichlorobenzene     | 53             | 10                       | 100.0     | 0           | 52.8                                      | 38.8     | 95.6        |      |          |      |
| Surr: 2-Fluorophenol       | 44             |                          | 200.0     |             | 21.8                                      | 17.6     | 104         |      |          |      |
| Surr: Phenol-d5            | 53             |                          | 200.0     |             | 26.7                                      | 17.7     | 89.9        |      |          |      |
| Surr: 2,4,6-Tribromophenol | 110            |                          | 200.0     |             | 54.5                                      | 16.3     | 122         |      |          |      |
| Surr: Nitrobenzene-d5      | 0              |                          | 100.0     |             | 0                                         | 45.3     | 117         |      |          | S    |
| Surr: 2-Fluorobiphenyl     | 58             |                          | 100.0     |             | 58.0                                      | 43       | 113         |      |          |      |

### Qualifiers:

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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                       |                |                |           |             |                                 |          |           |      |          |      |
|-----------------------|----------------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID             | 1410E28-001GMS | SampType:      | MS        | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:            | MW-71          | Batch ID:      | 16261     | RunNo:      | 22395                           |          |           |      |          |      |
| Prep Date:            | 11/6/2014      | Analysis Date: | 11/6/2014 | SeqNo:      | 660065                          | Units:   | µg/L      |      |          |      |
| Analyte               | Result         | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Terphenyl-d14 | 68             |                | 100.0     |             | 68.0                            | 47.6     | 122       |      |          |      |

|                            |                 |                |           |             |                                 |          |           |        |          |      |
|----------------------------|-----------------|----------------|-----------|-------------|---------------------------------|----------|-----------|--------|----------|------|
| Sample ID                  | 1410e28-001gmsd | SampType:      | MSD       | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |        |          |      |
| Client ID:                 | MW-71           | Batch ID:      | 16261     | RunNo:      | 22395                           |          |           |        |          |      |
| Prep Date:                 | 11/6/2014       | Analysis Date: | 11/6/2014 | SeqNo:      | 660066                          | Units:   | µg/L      |        |          |      |
| Analyte                    | Result          | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD   | RPDLimit | Qual |
| Acenaphthene               | 77              | 10             | 100.0     | 0           | 77.2                            | 52.5     | 94.5      | 1.25   | 20       |      |
| 4-Chloro-3-methylphenol    | 150             | 10             | 200.0     | 0           | 73.0                            | 45       | 103       | 4.24   | 20       |      |
| 2-Chlorophenol             | 130             | 10             | 200.0     | 0           | 65.8                            | 32.3     | 101       | 11.2   | 20       |      |
| 1,4-Dichlorobenzene        | 59              | 10             | 100.0     | 0           | 59.0                            | 34.5     | 97.5      | 2.05   | 20       |      |
| 2,4-Dinitrotoluene         | 55              | 10             | 100.0     | 0           | 54.5                            | 20.1     | 123       | 6.32   | 20       |      |
| N-Nitrosodi-n-propylamine  | ND              | 10             | 100.0     | 0           | 0                               | 26.9     | 131       | 0      | 20       | S    |
| 4-Nitrophenol              | 120             | 10             | 200.0     | 27.26       | 44.1                            | 11.6     | 55.4      | 22.3   | 20       | R    |
| Pentachlorophenol          | 110             | 20             | 200.0     | 5.120       | 54.2                            | 17.6     | 88.9      | 0.0352 | 20       |      |
| Phenol                     | 65              | 10             | 200.0     | 0           | 32.5                            | 18.4     | 66.5      | 79.2   | 20       | R    |
| Pyrene                     | 67              | 10             | 100.0     | 4.200       | 63.1                            | 43.1     | 111       | 12.4   | 20       |      |
| 1,2,4-Trichlorobenzene     | 57              | 10             | 100.0     | 0           | 57.0                            | 38.8     | 95.6      | 7.62   | 20       |      |
| Surr: 2-Fluorophenol       | 40              |                | 200.0     |             | 19.8                            | 17.6     | 104       | 0      | 0        |      |
| Surr: Phenol-d5            | 34              |                | 200.0     |             | 16.8                            | 17.7     | 89.9      | 0      | 0        | S    |
| Surr: 2,4,6-Tribromophenol | 110             |                | 200.0     |             | 53.4                            | 16.3     | 122       | 0      | 0        |      |
| Surr: Nitrobenzene-d5      | 0               |                | 100.0     |             | 0                               | 45.3     | 117       | 0      | 0        | S    |
| Surr: 2-Fluorobiphenyl     | 64              |                | 100.0     |             | 64.3                            | 43       | 113       | 0      | 0        |      |
| Surr: 4-Terphenyl-d14      | 66              |                | 100.0     |             | 66.5                            | 47.6     | 122       | 0      | 0        |      |

### Qualifiers:

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J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |     |                          |             |                               |          |                   |      |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|-------------------------------|----------|-------------------|------|----------|------|
| Sample ID                   | mb-1   |     | SampType: MBLK           |             | TestCode: SM2320B: Alkalinity |          |                   |      |          |      |
| Client ID:                  | PBW    |     | Batch ID: R22374         |             | RunNo: 22374                  |          |                   |      |          |      |
| Prep Date:                  |        |     | Analysis Date: 11/5/2014 |             | SeqNo: 659279                 |          | Units: mg/L CaCO3 |      |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC                          | LowLimit | HighLimit         | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | ND     | 20  |                          |             |                               |          |                   |      |          |      |

|                             |        |     |                          |             |      |                               |           |                   |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|------|-------------------------------|-----------|-------------------|----------|------|
| Sample ID                   | Ics-1  |     | SampType: LCS            |             |      | TestCode: SM2320B: Alkalinity |           |                   |          |      |
| Client ID:                  | LCSW   |     | Batch ID: R22374         |             |      | RunNo: 22374                  |           |                   |          |      |
| Prep Date:                  |        |     | Analysis Date: 11/5/2014 |             |      | SeqNo: 659280                 |           | Units: mg/L CaCO3 |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC | LowLimit                      | HighLimit | %RPD              | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 79     | 20  | 80.00                    | 0           | 98.6 | 90                            | 110       |                   |          |      |

|                             |        |     |                          |             |                               |          |                   |      |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|-------------------------------|----------|-------------------|------|----------|------|
| Sample ID                   | mb-2   |     | SampType: MBLK           |             | TestCode: SM2320B: Alkalinity |          |                   |      |          |      |
| Client ID:                  | PBW    |     | Batch ID: R22374         |             | RunNo: 22374                  |          |                   |      |          |      |
| Prep Date:                  |        |     | Analysis Date: 11/5/2014 |             | SeqNo: 659303                 |          | Units: mg/L CaCO3 |      |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC                          | LowLimit | HighLimit         | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | ND     | 20  |                          |             |                               |          |                   |      |          |      |

|                             |        |     |                          |             |                               |          |                   |      |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|-------------------------------|----------|-------------------|------|----------|------|
| Sample ID                   | lcs-2  |     | SampType: LCS            |             | TestCode: SM2320B: Alkalinity |          |                   |      |          |      |
| Client ID:                  | LCSW   |     | Batch ID: R22374         |             | RunNo: 22374                  |          |                   |      |          |      |
| Prep Date:                  |        |     | Analysis Date: 11/5/2014 |             | SeqNo: 659304                 |          | Units: mg/L CaCO3 |      |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC                          | LowLimit | HighLimit         | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 80     | 20  | 80.00                    | 0           | 99.7                          | 90       | 110               |      |          |      |

### Qualifiers:

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S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410E28

01-Dec-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                        |           |      |                          |             |                                               |          |             |      |          |      |
|------------------------|-----------|------|--------------------------|-------------|-----------------------------------------------|----------|-------------|------|----------|------|
| Sample ID              | MB-16230  |      | SampType: MBLK           |             | TestCode: SM2540C MOD: Total Dissolved Solids |          |             |      |          |      |
| Client ID:             | PBW       |      | Batch ID: 16230          |             | RunNo: 22349                                  |          |             |      |          |      |
| Prep Date:             | 11/4/2014 |      | Analysis Date: 11/5/2014 |             | SeqNo: 658584                                 |          | Units: mg/L |      |          |      |
| Analyte                | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                          | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Total Dissolved Solids | ND        | 20.0 |                          |             |                                               |          |             |      |          |      |

|                        |           |      |                |             |      |           |                                     |      |             |      |  |
|------------------------|-----------|------|----------------|-------------|------|-----------|-------------------------------------|------|-------------|------|--|
| Sample ID              | LCS-16230 |      | SampType:      | LCS         |      | TestCode: | SM2540C MOD: Total Dissolved Solids |      |             |      |  |
| Client ID:             | LCSW      |      | Batch ID:      | 16230       |      | RunNo:    | 22349                               |      |             |      |  |
| Prep Date:             | 11/4/2014 |      | Analysis Date: | 11/5/2014   |      | SeqNo:    | 658585                              |      | Units: mg/L |      |  |
| Analyte                | Result    | PQL  | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                           | %RPD | RPDLimit    | Qual |  |
| Total Dissolved Solids | 1010      | 20.0 | 1000           | 0           | 101  | 80        | 120                                 |      |             |      |  |

|                        |                |     |                          |             |                                               |          |             |      |          |      |
|------------------------|----------------|-----|--------------------------|-------------|-----------------------------------------------|----------|-------------|------|----------|------|
| Sample ID              | 1410E28-001CMS |     | SampType: MS             |             | TestCode: SM2540C MOD: Total Dissolved Solids |          |             |      |          |      |
| Client ID:             | MW-71          |     | Batch ID: 16230          |             | RunNo: 22349                                  |          |             |      |          |      |
| Prep Date:             | 11/4/2014      |     | Analysis Date: 11/5/2014 |             | SeqNo: 658593                                 |          | Units: mg/L |      |          |      |
| Analyte                | Result         | PQL | SPK value                | SPK Ref Val | %REC                                          | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Total Dissolved Solids | 6740           | 100 | 5000                     | 1650        | 102                                           | 80       | 120         |      |          |      |

|                        |                 |     |                |             |      |           |                                     |       |             |      |  |
|------------------------|-----------------|-----|----------------|-------------|------|-----------|-------------------------------------|-------|-------------|------|--|
| Sample ID              | 1410E28-001CMSD |     | SampType:      | MSD         |      | TestCode: | SM2540C MOD: Total Dissolved Solids |       |             |      |  |
| Client ID:             | MW-71           |     | Batch ID:      | 16230       |      | RunNo:    | 22349                               |       |             |      |  |
| Prep Date:             | 11/4/2014       |     | Analysis Date: | 11/5/2014   |      | SeqNo:    | 658594                              |       | Units: mg/L |      |  |
| Analyte                | Result          | PQL | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                           | %RPD  | RPDLimit    | Qual |  |
| Total Dissolved Solids | 6760            | 100 | 5000           | 1650        | 102  | 80        | 120                                 | 0.370 | 5           |      |  |

### Qualifiers:

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- S Spike Recovery outside accepted recovery limits

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- P Sample pH greater than 2.
- RL Reporting Detection Limit

# Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1410E28

RcptNo: 1

Received by/date: MG 10/31/14

Logged By: Celina Sessa 10/31/2014 8:45:00 AM Celina Sessa

Completed By: Celina Sessa 10/31/2014 10:41:27 AM Celina Sessa

Reviewed By: [Signature] 10/31/14

## Chain of Custody

- Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
- Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
- How was the sample delivered?

## Log In

- Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
- Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
- Sample(s) in proper container(s)? Yes ☒ No ☐
- Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
- Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
- Was preservative added to bottles? Yes ☒ No ☐ NA ☐
- VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
- Were any sample containers received broken? Yes ☒ No ☐
- Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☒ No ☐
- Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
- Is it clear what analyses were requested? Yes ☒ No ☐
- Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☒ No ☐

CS 10/31/14

metals analysis: added 1 ml HNO<sub>3</sub> to -001D for acceptable pH. Held in login for 24 hours.

CS 10/31/14

6, 2

(-2 or +12 unless noted)

Adjusted? yes

Checked by: CS

## Special Handling (if applicable)

- Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_

By Whom: \_\_\_\_\_ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

## 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 1.0     | Good      | Not Present |         |           |           |







# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                    |   | Analytical Method              |
|----------------------------|---|--------------------------------|
| Antimony                   | ✓ | SW-846 method 6010/6020        |
| Arsenic                    | ✓ | SW-846 method 6010/6020        |
| Barium                     | ✓ | SW-846 method 6010/6020        |
| Beryllium                  | ✓ | SW-846 method 6010/6020        |
| Cadmium                    | ✓ | SW-846 method 6010/6020        |
| Chromium                   | ✓ | SW-846 method 6010/6020        |
| Chromium VI                | ✓ | SW-846 Method 3060A            |
| Cobalt                     | ✓ | SW-846 method 6010/6020        |
| Cyanide                    | ✓ | SW-846 method 335.4/335.2 mod  |
| Lead                       | ✓ | SW-846 method 6010/6020        |
| <del>Tetraethyl lead</del> |   | <del>SW-846 method 6278C</del> |
| Mercury                    | ✓ | SW-846 method 7470/7471        |
| Nickel                     | ✓ | SW-846 method 6010/6020        |
| Selenium                   | ✓ | SW-846 method 6010/6020        |
| Silver                     | ✓ | SW-846 method 6010/6020        |
| Vanadium                   | ✓ | SW-846 method 6010/6020        |
| Zinc                       | ✓ | SW-846 method 6010/6020        |

# General Chemistry Parameters for Groundwater Samples

| Analyte                | Analytical Method                     |
|------------------------|---------------------------------------|
| Total Dissolved Solids | SM-2540C                              |
| Bicarbonate            | SM-2320B                              |
| Chloride               | EPA method 300.0                      |
| Sulfate                | EPA method 300.0                      |
| Calcium                | EPA method 6010/6020                  |
| Magnesium              | EPA method 6010/6020                  |
| Sodium                 | EPA method 6010/6020                  |
| Potassium              | EPA method 6010/6020                  |
| Manganese              | SW-846 method 6010/6020               |
| Nitrate/nitrite        | EPA method 300.0                      |
| Ferric/ferrous Iron    | SW-846 method 6010/6020 & SM 3500Fe2+ |



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 17, 2014

Kelly Robinson

Western Refining Southwest, Inc.  
#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409812

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/17/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

## Case Narrative

WO#: 1409812  
Date: 10/17/2014

---

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

---

Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 0-0.5'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 3:30:00 PM

**Lab ID:** 1409812-001

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 9/18/2014 10:42:20 PM | 15340                |
| Motor Oil Range Organics (MRO)                 | ND     | 54       |      | mg/Kg-dry | 1  | 9/18/2014 10:42:20 PM | 15340                |
| Surr: DNOP                                     | 104    | 57.9-140 |      | %REC      | 1  | 9/18/2014 10:42:20 PM | 15340                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.3      |      | mg/Kg-dry | 1  | 9/23/2014 11:06:41 PM | R21377               |
| Surr: BFB                                      | 95.4   | 80-120   |      | %REC      | 1  | 9/23/2014 11:06:41 PM | R21377               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 7.4    | 1.0      |      | wt%       | 1  | 9/17/2014 3:03:00 PM  | R21291               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.034    |      | mg/Kg-dry | 1  | 9/26/2014 10:56:31 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Arsenic                                        | 3.9    | 2.6      |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Barium                                         | 160    | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Beryllium                                      | 0.53   | 0.16     |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Chromium                                       | 10     | 0.32     |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Cobalt                                         | 4.7    | 0.32     |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Lead                                           | 7.0    | 0.26     |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Nickel                                         | 7.7    | 0.53     |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Vanadium                                       | 24     | 2.6      |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| Zinc                                           | 36     | 2.6      |      | mg/Kg-dry | 1  | 9/25/2014 1:04:38 PM  | 15466                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |
| Benzoic acid                                   | ND     | 0.54     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 0-0.5'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 3:30:00 PM

**Lab ID:** 1409812-001

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch               |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 4-Chloro-3-methylphenol                | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 4-Chloroaniline                        | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 2-Chloronaphthalene                    | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Di-n-butyl phthalate                   | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Di-n-octyl phthalate                   | ND     | 0.43 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 2,4-Dichlorophenol                     | ND     | 0.43 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 2,4-Dimethylphenol                     | ND     | 0.33 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 2,4-Dinitrophenol                      | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 2,4-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 2,6-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| Isophorone                             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 3 of 55 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-4 0-0.5'

Project: GROUP 9

Collection Date: 9/15/2014 3:30:00 PM

Lab ID: 1409812-001

Matrix: SOIL

Received Date: 9/17/2014 7:15:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|-----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                       | Analyst: DAM  |
| 2-Methylphenol                         | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| 3+4-Methylphenol                       | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| N-Nitrosodi-n-propylamine              | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| N-Nitrosodiphenylamine                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Naphthalene                            | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| 2-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| 3-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| 4-Nitroaniline                         | ND      | 0.43      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Nitrobenzene                           | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| 2-Nitrophenol                          | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| 4-Nitrophenol                          | ND      | 0.27      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Pentachlorophenol                      | ND      | 0.43      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Phenanthrene                           | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Phenol                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Pyrene                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Pyridine                               | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| 2,4,5-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| 2,4,6-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Surr: 2-Fluorophenol                   | 54.6    | 21-111    |      | %REC      | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Surr: Phenol-d5                        | 63.3    | 23.1-117  |      | %REC      | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Surr: 2,4,6-Tribromophenol             | 57.3    | 22.7-88.9 |      | %REC      | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Surr: Nitrobenzene-d5                  | 61.5    | 24.5-126  |      | %REC      | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Surr: 2-Fluorobiphenyl                 | 67.0    | 21.2-129  |      | %REC      | 1  | 9/19/2014 10:42:47 AM | 15370         |
| Surr: 4-Terphenyl-d14                  | 64.8    | 39.4-107  |      | %REC      | 1  | 9/19/2014 10:42:47 AM | 15370         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                       | Analyst: cadg |
| Benzene                                | ND      | 0.00123   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Toluene                                | ND      | 0.00123   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Ethylbenzene                           | ND      | 0.00123   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Xylenes, Total                         | ND      | 0.00123   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00123   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,2,4-Trimethylbenzene                 | ND      | 0.00123   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00123   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00123   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00123   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Naphthalene                            | ND      | 0.00123   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1-Methylnaphthalene                    | ND      | 0.00246   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 2-Methylnaphthalene                    | ND      | 0.00246   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Acetone                                | 0.00856 | 0.00614   |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 0-0.5'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 3:30:00 PM

**Lab ID:** 1409812-001

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|-----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                       | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Bromodichloromethane                   | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Bromoform                              | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Bromomethane                           | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 2-Butanone                             | ND     | 0.00614 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Carbon tetrachloride                   | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Chlorobenzene                          | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Chloroethane                           | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Chloroform                             | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Chloromethane                          | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 2-Chlorotoluene                        | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Carbon disulfide                       | ND     | 0.00614 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 4-Chlorotoluene                        | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| cis-1,2-DCE                            | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| cis-1,3-Dichloropropene                | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Dibromochloromethane                   | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Dibromomethane                         | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,2-Dichlorobenzene                    | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,3-Dichlorobenzene                    | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,4-Dichlorobenzene                    | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Dichlorodifluoromethane                | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,1-Dichloroethane                     | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,1-Dichloroethene                     | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,2-Dichloropropane                    | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,3-Dichloropropane                    | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 2,2-Dichloropropane                    | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 1,1-Dichloropropene                    | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Hexachlorobutadiene                    | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Isopropylbenzene                       | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 4-Isopropyltoluene                     | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Methylene chloride                     | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| n-Butylbenzene                         | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 2-Hexanone                             | ND     | 0.00614 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| n-Propylbenzene                        | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| sec-Butylbenzene                       | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| Styrene                                | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| 4-Methyl-2-pentanone                   | ND     | 0.00614 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |
| tert-Butylbenzene                      | ND     | 0.00123 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |              |
|--------------------|---------------------------------------------------|------------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |              |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |              |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               | Page 5 of 55 |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |              |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |              |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409812**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 0-0.5'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 3:30:00 PM

**Lab ID:** 1409812-001

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| Tetrachloroethene (PCE)                | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| trans-1,2-DCE                          | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| trans-1,3-Dichloropropene              | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| 1,1,1-Trichloroethane                  | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| 1,1,2-Trichloroethane                  | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| Trichloroethene (TCE)                  | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| Trichlorofluoromethane                 | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| 1,2,3-Trichloropropane                 | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| Vinyl chloride                         | ND     | 0.00123  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:41 AM | 15395                |
| Surr: 1,2-Dichloroethane-d4            | 115    | 70-130   |      | %REC      | 1  | 9/19/2014 11:55:41 AM | 15395                |
| Surr: 4-Bromofluorobenzene             | 111    | 65.3-135 |      | %REC      | 1  | 9/19/2014 11:55:41 AM | 15395                |
| Surr: Dibromofluoromethane             | 95.8   | 70-130   |      | %REC      | 1  | 9/19/2014 11:55:41 AM | 15395                |
| Surr: Toluene-d8                       | 104    | 70-130   |      | %REC      | 1  | 9/19/2014 11:55:41 AM | 15395                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 55 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409812**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 0.5-2.0'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 4:00:00 PM

**Lab ID:** 1409812-002

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 9/18/2014 11:13:03 PM | 15340                |
| Motor Oil Range Organics (MRO)                 | ND     | 54       |      | mg/Kg-dry | 1  | 9/18/2014 11:13:03 PM | 15340                |
| Surr: DNOP                                     | 104    | 57.9-140 |      | %REC      | 1  | 9/18/2014 11:13:03 PM | 15340                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.3      |      | mg/Kg-dry | 1  | 9/23/2014 11:35:16 PM | R21377               |
| Surr: BFB                                      | 96.2   | 80-120   |      | %REC      | 1  | 9/23/2014 11:35:16 PM | R21377               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 7.7    | 1.0      |      | wt%       | 1  | 9/17/2014 3:03:00 PM  | R21291               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 9/26/2014 10:58:17 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Arsenic                                        | 3.2    | 2.6      |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Barium                                         | 170    | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Beryllium                                      | 0.49   | 0.16     |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Chromium                                       | 7.0    | 0.32     |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Cobalt                                         | 4.6    | 0.32     |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Lead                                           | 13     | 0.26     |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Nickel                                         | 7.6    | 0.53     |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Vanadium                                       | 23     | 2.6      |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| Zinc                                           | 32     | 2.6      |      | mg/Kg-dry | 1  | 9/25/2014 1:07:09 PM  | 15466                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |
| Benzoic acid                                   | ND     | 0.54     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 0.5-2.0'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 4:00:00 PM

**Lab ID:** 1409812-002

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch               |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 4-Chloro-3-methylphenol                | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 4-Chloroaniline                        | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 2-Chloronaphthalene                    | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Di-n-butyl phthalate                   | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Di-n-octyl phthalate                   | ND     | 0.43 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 2,4-Dichlorophenol                     | ND     | 0.43 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 2,4-Dimethylphenol                     | ND     | 0.32 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 2,4-Dinitrophenol                      | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 2,4-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 2,6-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| Isophorone                             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 8 of 55 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-4 0.5-2.0'

Project: GROUP 9

Collection Date: 9/15/2014 4:00:00 PM

Lab ID: 1409812-002

Matrix: SOIL

Received Date: 9/17/2014 7:15:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|-----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                       | Analyst: DAM  |
| 2-Methylphenol                         | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| 3+4-Methylphenol                       | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| N-Nitrosodi-n-propylamine              | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| N-Nitrosodiphenylamine                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Naphthalene                            | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| 2-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| 3-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| 4-Nitroaniline                         | ND      | 0.43      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Nitrobenzene                           | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| 2-Nitrophenol                          | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| 4-Nitrophenol                          | ND      | 0.27      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Pentachlorophenol                      | ND      | 0.43      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Phenanthrene                           | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Phenol                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Pyrene                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Pyridine                               | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| 2,4,5-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| 2,4,6-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Surr: 2-Fluorophenol                   | 50.1    | 21-111    |      | %REC      | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Surr: Phenol-d5                        | 52.4    | 23.1-117  |      | %REC      | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Surr: 2,4,6-Tribromophenol             | 51.6    | 22.7-88.9 |      | %REC      | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Surr: Nitrobenzene-d5                  | 52.7    | 24.5-126  |      | %REC      | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Surr: 2-Fluorobiphenyl                 | 53.6    | 21.2-129  |      | %REC      | 1  | 9/19/2014 12:09:34 PM | 15370         |
| Surr: 4-Terphenyl-d14                  | 59.4    | 39.4-107  |      | %REC      | 1  | 9/19/2014 12:09:34 PM | 15370         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                       | Analyst: cadg |
| Benzene                                | ND      | 0.00128   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| Toluene                                | ND      | 0.00128   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| Ethylbenzene                           | ND      | 0.00128   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| Xylenes, Total                         | ND      | 0.00128   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00128   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| 1,2,4-Trimethylbenzene                 | ND      | 0.00128   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00128   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00128   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00128   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| Naphthalene                            | ND      | 0.00128   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| 1-Methylnaphthalene                    | ND      | 0.00255   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| 2-Methylnaphthalene                    | ND      | 0.00255   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |
| Acetone                                | 0.00921 | 0.00638   |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM  | 15395         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 0.5-2.0'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 4:00:00 PM

**Lab ID:** 1409812-002

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Bromodichloromethane                   | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Bromoform                              | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Bromomethane                           | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 2-Butanone                             | ND     | 0.00638 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Carbon tetrachloride                   | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Chlorobenzene                          | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Chloroethane                           | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Chloroform                             | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Chloromethane                          | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 2-Chlorotoluene                        | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Carbon disulfide                       | ND     | 0.00638 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 4-Chlorotoluene                        | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| cis-1,2-DCE                            | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| cis-1,3-Dichloropropene                | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Dibromochloromethane                   | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Dibromomethane                         | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 1,2-Dichlorobenzene                    | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 1,3-Dichlorobenzene                    | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 1,4-Dichlorobenzene                    | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Dichlorodifluoromethane                | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 1,1-Dichloroethane                     | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 1,1-Dichloroethene                     | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 1,2-Dichloropropane                    | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 1,3-Dichloropropane                    | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 2,2-Dichloropropane                    | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 1,1-Dichloropropene                    | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Hexachlorobutadiene                    | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Isopropylbenzene                       | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 4-Isopropyltoluene                     | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Methylene chloride                     | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| n-Butylbenzene                         | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 2-Hexanone                             | ND     | 0.00638 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| n-Propylbenzene                        | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| sec-Butylbenzene                       | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| Styrene                                | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| 4-Methyl-2-pentanone                   | ND     | 0.00638 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |
| tert-Butylbenzene                      | ND     | 0.00128 |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409812**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-4 0.5-2.0'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 4:00:00 PM

**Lab ID:** 1409812-002

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| Tetrachloroethene (PCE)                | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| trans-1,2-DCE                          | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| trans-1,3-Dichloropropene              | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| 1,1,1-Trichloroethane                  | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| 1,1,2-Trichloroethane                  | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| Trichloroethene (TCE)                  | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| Trichlorofluoromethane                 | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| 1,2,3-Trichloropropane                 | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| Vinyl chloride                         | ND     | 0.00128  |      | mg/Kg-dry | 1  | 9/19/2014 1:22:15 PM | 15395                |
| Surr: 1,2-Dichloroethane-d4            | 108    | 70-130   |      | %REC      | 1  | 9/19/2014 1:22:15 PM | 15395                |
| Surr: 4-Bromofluorobenzene             | 101    | 65.3-135 |      | %REC      | 1  | 9/19/2014 1:22:15 PM | 15395                |
| Surr: Dibromofluoromethane             | 89.5   | 70-130   |      | %REC      | 1  | 9/19/2014 1:22:15 PM | 15395                |
| Surr: Toluene-d8                       | 98.5   | 70-130   |      | %REC      | 1  | 9/19/2014 1:22:15 PM | 15395                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409812**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 0-0.5'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 9:55:00 AM

**Lab ID:** 1409812-003

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 17     | 11       |      | mg/Kg-dry | 1  | 9/18/2014 11:43:36 PM | 15340                |
| Motor Oil Range Organics (MRO)                 | ND     | 57       |      | mg/Kg-dry | 1  | 9/18/2014 11:43:36 PM | 15340                |
| Surr: DNOP                                     | 103    | 57.9-140 |      | %REC      | 1  | 9/18/2014 11:43:36 PM | 15340                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.7      |      | mg/Kg-dry | 1  | 9/24/2014 12:03:52 AM | R21377               |
| Surr: BFB                                      | 96.6   | 80-120   |      | %REC      | 1  | 9/24/2014 12:03:52 AM | R21377               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 12     | 1.0      |      | wt%       | 1  | 9/17/2014 3:03:00 PM  | R21291               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.26   | 0.036    |      | mg/Kg-dry | 1  | 9/26/2014 11:00:04 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Arsenic                                        | 6.4    | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Barium                                         | 180    | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Beryllium                                      | 0.59   | 0.17     |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Cadmium                                        | 0.14   | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Chromium                                       | 14     | 0.33     |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Cobalt                                         | 5.8    | 0.33     |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Lead                                           | 26     | 0.28     |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Nickel                                         | 10     | 0.56     |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Vanadium                                       | 26     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| Zinc                                           | 65     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:09:41 PM  | 15466                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |
| Benzoic acid                                   | ND     | 0.57     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-3 0-0.5'

Project: GROUP 9

Collection Date: 9/16/2014 9:55:00 AM

Lab ID: 1409812-003

Matrix: SOIL

Received Date: 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: DAM |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 4-Chloro-3-methylphenol                | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 4-Chloroaniline                        | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 2-Chloronaphthalene                    | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Di-n-butyl phthalate                   | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Di-n-octyl phthalate                   | ND     | 0.46 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 2,4-Dichlorophenol                     | ND     | 0.46 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 2,4-Dinitrophenol                      | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 2,4-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 2,6-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| Isophorone                             | ND     | 0.57 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 1-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |
| 2-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 12:38:36 PM | 15370        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 0-0.5'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 9:55:00 AM

**Lab ID:** 1409812-003

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL        | Qual | Units                | DF | Date Analyzed         | Batch  |
|----------------------------------------|--------|-----------|------|----------------------|----|-----------------------|--------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: <b>DAM</b>  |    |                       |        |
| 2-Methylphenol                         | ND     | 0.57      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| 3+4-Methylphenol                       | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| N-Nitrosodi-n-propylamine              | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| N-Nitrosodiphenylamine                 | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Naphthalene                            | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| 2-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| 3-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| 4-Nitroaniline                         | ND     | 0.46      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Nitrobenzene                           | ND     | 0.57      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| 2-Nitrophenol                          | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| 4-Nitrophenol                          | ND     | 0.29      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Pentachlorophenol                      | ND     | 0.46      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Phenanthrene                           | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Phenol                                 | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Pyrene                                 | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Pyridine                               | ND     | 0.57      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| 1,2,4-Trichlorobenzene                 | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| 2,4,5-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| 2,4,6-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry            | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Surr: 2-Fluorophenol                   | 49.8   | 21-111    |      | %REC                 | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Surr: Phenol-d5                        | 57.1   | 23.1-117  |      | %REC                 | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Surr: 2,4,6-Tribromophenol             | 62.1   | 22.7-88.9 |      | %REC                 | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Surr: Nitrobenzene-d5                  | 54.8   | 24.5-126  |      | %REC                 | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Surr: 2-Fluorobiphenyl                 | 61.4   | 21.2-129  |      | %REC                 | 1  | 9/19/2014 12:38:36 PM | 15370  |
| Surr: 4-Terphenyl-d14                  | 64.7   | 39.4-107  |      | %REC                 | 1  | 9/19/2014 12:38:36 PM | 15370  |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      | Analyst: <b>cadg</b> |    |                       |        |
| Benzene                                | ND     | 0.037     |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| Toluene                                | 0.039  | 0.037     |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| Ethylbenzene                           | ND     | 0.037     |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.037     |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| 1,2,4-Trimethylbenzene                 | 0.12   | 0.037     |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| 1,3,5-Trimethylbenzene                 | ND     | 0.037     |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.037     |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.037     |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| Naphthalene                            | ND     | 0.074     |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| 1-Methylnaphthalene                    | ND     | 0.15      |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| 2-Methylnaphthalene                    | ND     | 0.15      |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| Acetone                                | ND     | 0.55      |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |
| Bromobenzene                           | ND     | 0.037     |      | mg/Kg-dry            | 1  | 9/22/2014 3:14:35 PM  | R21361 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 0-0.5'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 9:55:00 AM

**Lab ID:** 1409812-003

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch         |
|------------------------------------|--------|-------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: cadg |
| Bromodichloromethane               | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Bromoform                          | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Bromomethane                       | ND     | 0.11  |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 2-Butanone                         | ND     | 0.37  |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Carbon disulfide                   | ND     | 0.37  |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Carbon tetrachloride               | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Chlorobenzene                      | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Chloroethane                       | ND     | 0.074 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Chloroform                         | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Chloromethane                      | ND     | 0.11  |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 2-Chlorotoluene                    | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 4-Chlorotoluene                    | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| cis-1,2-DCE                        | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| cis-1,3-Dichloropropene            | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.074 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Dibromochloromethane               | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Dibromomethane                     | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 1,2-Dichlorobenzene                | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 1,3-Dichlorobenzene                | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 1,4-Dichlorobenzene                | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Dichlorodifluoromethane            | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 1,1-Dichloroethane                 | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 1,1-Dichloroethene                 | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 1,2-Dichloropropane                | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 1,3-Dichloropropane                | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 2,2-Dichloropropane                | ND     | 0.074 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 1,1-Dichloropropene                | ND     | 0.074 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Hexachlorobutadiene                | ND     | 0.074 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 2-Hexanone                         | ND     | 0.37  |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Isopropylbenzene                   | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 4-Isopropyltoluene                 | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 4-Methyl-2-pentanone               | ND     | 0.37  |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Methylene chloride                 | ND     | 0.11  |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| n-Butylbenzene                     | ND     | 0.11  |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| n-Propylbenzene                    | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| sec-Butylbenzene                   | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| Styrene                            | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| tert-Butylbenzene                  | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/22/2014 3:14:35 PM | R21361        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-3 0-0.5'

Project: GROUP 9

Collection Date: 9/16/2014 9:55:00 AM

Lab ID: 1409812-003

Matrix: SOIL

Received Date: 9/17/2014 7:15:00 AM

| Analyses                           | Result | RL     | Qual | Units         | DF | Date Analyzed        | Batch  |
|------------------------------------|--------|--------|------|---------------|----|----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: cadg |    |                      |        |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.037  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| Tetrachloroethene (PCE)            | ND     | 0.037  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| trans-1,2-DCE                      | ND     | 0.037  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| trans-1,3-Dichloropropene          | ND     | 0.037  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| 1,2,3-Trichlorobenzene             | ND     | 0.074  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| 1,2,4-Trichlorobenzene             | ND     | 0.037  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| 1,1,1-Trichloroethane              | ND     | 0.037  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| 1,1,2-Trichloroethane              | ND     | 0.037  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| Trichloroethene (TCE)              | ND     | 0.037  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| Trichlorofluoromethane             | ND     | 0.037  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| 1,2,3-Trichloropropane             | ND     | 0.074  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| Vinyl chloride                     | ND     | 0.037  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| Xylenes, Total                     | 0.18   | 0.074  |      | mg/Kg-dry     | 1  | 9/22/2014 3:14:35 PM | R21361 |
| Surr: Dibromofluoromethane         | 92.1   | 70-130 |      | %REC          | 1  | 9/22/2014 3:14:35 PM | R21361 |
| Surr: 1,2-Dichloroethane-d4        | 85.1   | 70-130 |      | %REC          | 1  | 9/22/2014 3:14:35 PM | R21361 |
| Surr: Toluene-d8                   | 89.5   | 70-130 |      | %REC          | 1  | 9/22/2014 3:14:35 PM | R21361 |
| Surr: 4-Bromofluorobenzene         | 88.5   | 70-130 |      | %REC          | 1  | 9/22/2014 3:14:35 PM | R21361 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|             |   |                                                 |    |                                                    |               |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 16 of 55 |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409812**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 0.5-2.0'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 10:15:00 AM

**Lab ID:** 1409812-004

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 86     | 12       |      | mg/Kg-dry | 1  | 9/19/2014 12:14:22 AM | 15340                |
| Motor Oil Range Organics (MRO)                 | ND     | 58       |      | mg/Kg-dry | 1  | 9/19/2014 12:14:22 AM | 15340                |
| Surr: DNOP                                     | 114    | 57.9-140 |      | %REC      | 1  | 9/19/2014 12:14:22 AM | 15340                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 30     | 7.1      |      | mg/Kg-dry | 2  | 9/24/2014 1:01:10 AM  | R21377               |
| Surr: BFB                                      | 133    | 80-120   | S    | %REC      | 2  | 9/24/2014 1:01:10 AM  | R21377               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 13     | 1.0      |      | wt%       | 1  | 9/17/2014 3:03:00 PM  | R21291               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.18   | 0.038    |      | mg/Kg-dry | 1  | 9/26/2014 11:01:50 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.9      |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Arsenic                                        | 5.8    | 2.9      |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Barium                                         | 230    | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Beryllium                                      | 0.59   | 0.17     |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Chromium                                       | 11     | 0.34     |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Cobalt                                         | 6.9    | 0.34     |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Lead                                           | 20     | 0.29     |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Nickel                                         | 11     | 0.57     |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Selenium                                       | ND     | 2.9      |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Silver                                         | 0.33   | 0.29     |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Vanadium                                       | 26     | 2.9      |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| Zinc                                           | 110    | 2.9      |      | mg/Kg-dry | 1  | 9/25/2014 1:12:22 PM  | 15466                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |
| Benzoic acid                                   | ND     | 0.57     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:07:38 PM  | 15370                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 0.5-2.0'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 10:15:00 AM

**Lab ID:** 1409812-004

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF                  | Date Analyzed        | Batch |
|----------------------------------------|--------|------|------|-----------|---------------------|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           | Analyst: <b>DAM</b> |                      |       |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.57 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 4-Chloro-3-methylphenol                | ND     | 0.57 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 4-Chloroaniline                        | ND     | 0.57 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 2-Chloronaphthalene                    | ND     | 0.29 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Di-n-butyl phthalate                   | ND     | 0.57 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Di-n-octyl phthalate                   | ND     | 0.46 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 3,3'-Dichlorobenzidine                 | ND     | 0.29 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 2,4-Dichlorophenol                     | ND     | 0.46 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.57 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 2,4-Dinitrophenol                      | ND     | 0.57 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 2,4-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 2,6-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| Isophorone                             | ND     | 0.57 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 1-Methylnaphthalene                    | 1.5    | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |
| 2-Methylnaphthalene                    | 2.5    | 0.23 |      | mg/Kg-dry | 1                   | 9/19/2014 1:07:38 PM | 15370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 0.5-2.0'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 10:15:00 AM

**Lab ID:** 1409812-004

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL        | Qual | Units               | DF | Date Analyzed         | Batch  |
|----------------------------------------|--------|-----------|------|---------------------|----|-----------------------|--------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: <b>DAM</b> |    |                       |        |
| 2-Methylphenol                         | ND     | 0.57      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| 3+4-Methylphenol                       | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| N-Nitrosodi-n-propylamine              | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| N-Nitrosodiphenylamine                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Naphthalene                            | 1.1    | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| 2-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| 3-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| 4-Nitroaniline                         | ND     | 0.46      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Nitrobenzene                           | ND     | 0.57      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| 2-Nitrophenol                          | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| 4-Nitrophenol                          | ND     | 0.29      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Pentachlorophenol                      | ND     | 0.46      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Phenanthrene                           | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Phenol                                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Pyrene                                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Pyridine                               | ND     | 0.57      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| 1,2,4-Trichlorobenzene                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| 2,4,5-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| 2,4,6-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Surr: 2-Fluorophenol                   | 49.9   | 21-111    |      | %REC                | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Surr: Phenol-d5                        | 53.7   | 23.1-117  |      | %REC                | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Surr: 2,4,6-Tribromophenol             | 69.2   | 22.7-88.9 |      | %REC                | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Surr: Nitrobenzene-d5                  | 55.4   | 24.5-126  |      | %REC                | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Surr: 2-Fluorobiphenyl                 | 67.9   | 21.2-129  |      | %REC                | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| Surr: 4-Terphenyl-d14                  | 73.4   | 39.4-107  |      | %REC                | 1  | 9/19/2014 1:07:38 PM  | 15370  |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      | Analyst: <b>RAA</b> |    |                       |        |
| Benzene                                | 0.063  | 0.035     |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| Toluene                                | ND     | 0.035     |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| Ethylbenzene                           | 0.44   | 0.035     |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.035     |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| 1,2,4-Trimethylbenzene                 | 2.1    | 0.035     |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| 1,3,5-Trimethylbenzene                 | 0.79   | 0.035     |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.035     |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.035     |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| Naphthalene                            | 0.42   | 0.071     |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| 1-Methylnaphthalene                    | 0.35   | 0.14      |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| 2-Methylnaphthalene                    | 0.69   | 0.14      |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| Acetone                                | ND     | 0.53      |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |
| Bromobenzene                           | ND     | 0.035     |      | mg/Kg-dry           | 1  | 9/18/2014 11:44:27 AM | R21306 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 0.5-2.0'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 10:15:00 AM

**Lab ID:** 1409812-004

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed         | Batch        |
|------------------------------------|--------|-------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                       | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Bromoform                          | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Bromomethane                       | ND     | 0.11  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 2-Butanone                         | ND     | 0.35  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Carbon disulfide                   | ND     | 0.35  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Carbon tetrachloride               | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Chlorobenzene                      | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Chloroethane                       | ND     | 0.071 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Chloroform                         | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Chloromethane                      | ND     | 0.11  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 2-Chlorotoluene                    | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 4-Chlorotoluene                    | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| cis-1,2-DCE                        | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| cis-1,3-Dichloropropene            | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.071 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Dibromochloromethane               | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Dibromomethane                     | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 1,2-Dichlorobenzene                | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 1,3-Dichlorobenzene                | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 1,4-Dichlorobenzene                | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Dichlorodifluoromethane            | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 1,1-Dichloroethane                 | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 1,1-Dichloroethene                 | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 1,2-Dichloropropane                | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 1,3-Dichloropropane                | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 2,2-Dichloropropane                | ND     | 0.071 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 1,1-Dichloropropene                | ND     | 0.071 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Hexachlorobutadiene                | ND     | 0.071 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 2-Hexanone                         | ND     | 0.35  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Isopropylbenzene                   | 0.061  | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 4-Isopropyltoluene                 | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 4-Methyl-2-pentanone               | ND     | 0.35  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Methylene chloride                 | ND     | 0.11  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| n-Butylbenzene                     | 0.17   | 0.11  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| n-Propylbenzene                    | 0.26   | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| sec-Butylbenzene                   | 0.046  | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| Styrene                            | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| tert-Butylbenzene                  | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.035 |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306       |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409812**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 0.5-2.0'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 10:15:00 AM

**Lab ID:** 1409812-004

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed         | Batch               |
|------------------------------------|--------|--------|------|-----------|----|-----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                       | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| Tetrachloroethene (PCE)            | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| trans-1,2-DCE                      | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| trans-1,3-Dichloropropene          | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| 1,2,3-Trichlorobenzene             | ND     | 0.071  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| 1,2,4-Trichlorobenzene             | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| 1,1,1-Trichloroethane              | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| 1,1,2-Trichloroethane              | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| Trichloroethene (TCE)              | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| Trichlorofluoromethane             | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| 1,2,3-Trichloropropane             | ND     | 0.071  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| Vinyl chloride                     | ND     | 0.035  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| Xylenes, Total                     | 1.5    | 0.071  |      | mg/Kg-dry | 1  | 9/18/2014 11:44:27 AM | R21306              |
| Surr: Dibromofluoromethane         | 88.7   | 70-130 |      | %REC      | 1  | 9/18/2014 11:44:27 AM | R21306              |
| Surr: 1,2-Dichloroethane-d4        | 80.8   | 70-130 |      | %REC      | 1  | 9/18/2014 11:44:27 AM | R21306              |
| Surr: Toluene-d8                   | 84.4   | 70-130 |      | %REC      | 1  | 9/18/2014 11:44:27 AM | R21306              |
| Surr: 4-Bromofluorobenzene         | 103    | 70-130 |      | %REC      | 1  | 9/18/2014 11:44:27 AM | R21306              |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 4-6'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 10:40:00 AM

**Lab ID:** 1409812-005

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 350    | 11       |      | mg/Kg-dry | 1  | 9/19/2014 12:45:10 AM | 15340                |
| Motor Oil Range Organics (MRO)                 | ND     | 55       |      | mg/Kg-dry | 1  | 9/19/2014 12:45:10 AM | 15340                |
| Surr: DNOP                                     | 117    | 57.9-140 |      | %REC      | 1  | 9/19/2014 12:45:10 AM | 15340                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 190    | 36       |      | mg/Kg-dry | 10 | 9/24/2014 1:58:20 AM  | R21377               |
| Surr: BFB                                      | 117    | 80-120   |      | %REC      | 10 | 9/24/2014 1:58:20 AM  | R21377               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 11     | 1.0      |      | wt%       | 1  | 9/17/2014 3:03:00 PM  | R21291               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.038    |      | mg/Kg-dry | 1  | 9/26/2014 11:03:37 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Arsenic                                        | ND     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Barium                                         | 92     | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Beryllium                                      | 0.42   | 0.17     |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Chromium                                       | 5.1    | 0.33     |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Cobalt                                         | 3.7    | 0.33     |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Lead                                           | 3.0    | 0.28     |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Nickel                                         | 5.7    | 0.55     |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Vanadium                                       | 21     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| Zinc                                           | 22     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:14:55 PM  | 15466                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |
| Benzoic acid                                   | ND     | 0.56     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM  | 15370                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 4-6'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 10:40:00 AM

**Lab ID:** 1409812-005

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 4-Chloro-3-methylphenol                | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 4-Chloroaniline                        | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 2-Chloronaphthalene                    | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Di-n-butyl phthalate                   | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Di-n-octyl phthalate                   | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 2,4-Dichlorophenol                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 2,4-Dinitrophenol                      | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 2,4-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 2,6-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| Isophorone                             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 1-Methylnaphthalene                    | 1.4    | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |
| 2-Methylnaphthalene                    | 2.7    | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 1:36:49 PM | 15370               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 4-6'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 10:40:00 AM

**Lab ID:** 1409812-005

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL        | Qual | Units               | DF | Date Analyzed        | Batch  |
|----------------------------------------|--------|-----------|------|---------------------|----|----------------------|--------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: <b>DAM</b> |    |                      |        |
| 2-Methylphenol                         | ND     | 0.56      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| 3+4-Methylphenol                       | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| N-Nitrosodi-n-propylamine              | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| N-Nitrosodiphenylamine                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Naphthalene                            | 1.2    | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| 2-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| 3-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| 4-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Nitrobenzene                           | ND     | 0.56      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| 2-Nitrophenol                          | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| 4-Nitrophenol                          | ND     | 0.28      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Pentachlorophenol                      | ND     | 0.45      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Phenanthrene                           | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Phenol                                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Pyrene                                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Pyridine                               | ND     | 0.56      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| 1,2,4-Trichlorobenzene                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| 2,4,5-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| 2,4,6-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Surr: 2-Fluorophenol                   | 34.8   | 21-111    |      | %REC                | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Surr: Phenol-d5                        | 31.3   | 23.1-117  |      | %REC                | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Surr: 2,4,6-Tribromophenol             | 41.7   | 22.7-88.9 |      | %REC                | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Surr: Nitrobenzene-d5                  | 38.9   | 24.5-126  |      | %REC                | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Surr: 2-Fluorobiphenyl                 | 41.1   | 21.2-129  |      | %REC                | 1  | 9/19/2014 1:36:49 PM | 15370  |
| Surr: 4-Terphenyl-d14                  | 52.3   | 39.4-107  |      | %REC                | 1  | 9/19/2014 1:36:49 PM | 15370  |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      | Analyst: <b>RAA</b> |    |                      |        |
| Benzene                                | ND     | 0.36      |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Toluene                                | ND     | 0.36      |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Ethylbenzene                           | 5.4    | 0.36      |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.36      |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,2,4-Trimethylbenzene                 | 26     | 0.36      |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,3,5-Trimethylbenzene                 | 8.5    | 0.36      |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.36      |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.36      |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Naphthalene                            | 5.2    | 0.72      |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1-Methylnaphthalene                    | 3.9    | 1.4       |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 2-Methylnaphthalene                    | 8.1    | 1.4       |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Acetone                                | ND     | 5.4       |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Bromobenzene                           | ND     | 0.36      |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 4-6'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 10:40:00 AM

**Lab ID:** 1409812-005

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                           | Result | RL   | Qual | Units               | DF | Date Analyzed        | Batch  |
|------------------------------------|--------|------|------|---------------------|----|----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      | Analyst: <b>RAA</b> |    |                      |        |
| Bromodichloromethane               | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Bromoform                          | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Bromomethane                       | ND     | 1.1  |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 2-Butanone                         | ND     | 3.6  |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Carbon disulfide                   | ND     | 3.6  |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Carbon tetrachloride               | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Chlorobenzene                      | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Chloroethane                       | ND     | 0.72 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Chloroform                         | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Chloromethane                      | ND     | 1.1  |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 2-Chlorotoluene                    | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 4-Chlorotoluene                    | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| cis-1,2-DCE                        | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| cis-1,3-Dichloropropene            | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.72 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Dibromochloromethane               | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Dibromomethane                     | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,2-Dichlorobenzene                | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,3-Dichlorobenzene                | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,4-Dichlorobenzene                | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Dichlorodifluoromethane            | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,1-Dichloroethane                 | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,1-Dichloroethene                 | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,2-Dichloropropane                | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,3-Dichloropropane                | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 2,2-Dichloropropane                | ND     | 0.72 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,1-Dichloropropene                | ND     | 0.72 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Hexachlorobutadiene                | ND     | 0.72 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 2-Hexanone                         | ND     | 3.6  |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Isopropylbenzene                   | 0.67   | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 4-Isopropyltoluene                 | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 4-Methyl-2-pentanone               | ND     | 3.6  |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Methylene chloride                 | ND     | 1.1  |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| n-Butylbenzene                     | 2.0    | 1.1  |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| n-Propylbenzene                    | 3.7    | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| sec-Butylbenzene                   | 0.50   | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Styrene                            | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| tert-Butylbenzene                  | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409812**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 4-6'

**Project:** GROUP 9

**Collection Date:** 9/15/2014 10:40:00 AM

**Lab ID:** 1409812-005

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch  |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |        |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Tetrachloroethene (PCE)            | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| trans-1,2-DCE                      | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| trans-1,3-Dichloropropene          | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,2,3-Trichlorobenzene             | ND     | 0.72   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,2,4-Trichlorobenzene             | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,1,1-Trichloroethane              | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,1,2-Trichloroethane              | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Trichloroethene (TCE)              | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Trichlorofluoromethane             | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| 1,2,3-Trichloropropane             | ND     | 0.72   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Vinyl chloride                     | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Xylenes, Total                     | 27     | 0.72   |      | mg/Kg-dry           | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Surr: Dibromofluoromethane         | 87.0   | 70-130 |      | %REC                | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Surr: 1,2-Dichloroethane-d4        | 83.1   | 70-130 |      | %REC                | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Surr: Toluene-d8                   | 88.6   | 70-130 |      | %REC                | 10 | 9/18/2014 1:09:02 PM | R21306 |
| Surr: 4-Bromofluorobenzene         | 110    | 70-130 |      | %REC                | 10 | 9/18/2014 1:09:02 PM | R21306 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 26 of 55 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409812**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 14-16'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 10:50:00 AM

**Lab ID:** 1409812-006

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 96     | 11       |      | mg/Kg-dry | 1  | 9/19/2014 1:16:01 AM  | 15340                |
| Motor Oil Range Organics (MRO)                 | ND     | 53       |      | mg/Kg-dry | 1  | 9/19/2014 1:16:01 AM  | 15340                |
| Surr: DNOP                                     | 112    | 57.9-140 |      | %REC      | 1  | 9/19/2014 1:16:01 AM  | 15340                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 49     | 6.8      |      | mg/Kg-dry | 2  | 9/24/2014 2:55:27 AM  | R21377               |
| Surr: BFB                                      | 170    | 80-120   | S    | %REC      | 2  | 9/24/2014 2:55:27 AM  | R21377               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 5.5    | 1.0      |      | wt%       | 1  | 9/17/2014 3:03:00 PM  | R21291               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.033    |      | mg/Kg-dry | 1  | 9/26/2014 11:09:04 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>JLF</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 9/29/2014 12:03:49 PM | 15466                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 9/25/2014 1:21:21 PM  | 15466                |
| Barium                                         | 200    | 0.10     |      | mg/Kg-dry | 1  | 9/29/2014 12:03:49 PM | 15466                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 9/25/2014 1:21:21 PM  | 15466                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 9/25/2014 1:21:21 PM  | 15466                |
| Chromium                                       | 1.6    | 0.30     |      | mg/Kg-dry | 1  | 9/25/2014 1:21:21 PM  | 15466                |
| Cobalt                                         | 3.2    | 0.30     |      | mg/Kg-dry | 1  | 9/25/2014 1:21:21 PM  | 15466                |
| Lead                                           | 2.8    | 0.25     |      | mg/Kg-dry | 1  | 9/25/2014 1:21:21 PM  | 15466                |
| Nickel                                         | 2.0    | 0.51     |      | mg/Kg-dry | 1  | 9/25/2014 1:21:21 PM  | 15466                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 9/25/2014 1:21:21 PM  | 15466                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 9/25/2014 1:21:21 PM  | 15466                |
| Vanadium                                       | 20     | 2.5      |      | mg/Kg-dry | 1  | 9/25/2014 1:21:21 PM  | 15466                |
| Zinc                                           | 16     | 2.5      |      | mg/Kg-dry | 1  | 9/25/2014 1:21:21 PM  | 15466                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |
| Benzoic acid                                   | ND     | 0.53     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM  | 15370                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 14-16'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 10:50:00 AM

**Lab ID:** 1409812-006

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.53 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 4-Chloro-3-methylphenol                | ND     | 0.53 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 4-Chloroaniline                        | ND     | 0.53 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Di-n-butyl phthalate                   | ND     | 0.53 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 2,4-Dimethylphenol                     | ND     | 0.32 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.53 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 2,4-Dinitrophenol                      | ND     | 0.53 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 2,4-Dinitrotoluene                     | ND     | 0.53 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 2,6-Dinitrotoluene                     | ND     | 0.53 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| Isophorone                             | ND     | 0.53 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 1-Methylnaphthalene                    | 0.56   | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |
| 2-Methylnaphthalene                    | 1.0    | 0.21 |      | mg/Kg-dry | 1  | 9/19/2014 2:06:01 PM | 15370               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-3 14-16'

Project: GROUP 9

Collection Date: 9/16/2014 10:50:00 AM

Lab ID: 1409812-006

Matrix: SOIL

Received Date: 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL        | Qual | Units               | DF | Date Analyzed         | Batch  |
|----------------------------------------|--------|-----------|------|---------------------|----|-----------------------|--------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: <b>DAM</b> |    |                       |        |
| 2-Methylphenol                         | ND     | 0.53      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Naphthalene                            | 0.39   | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Nitrobenzene                           | ND     | 0.53      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Phenanthrene                           | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Pyridine                               | ND     | 0.53      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry           | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Surr: 2-Fluorophenol                   | 62.3   | 21-111    |      | %REC                | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Surr: Phenol-d5                        | 63.7   | 23.1-117  |      | %REC                | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Surr: 2,4,6-Tribromophenol             | 51.1   | 22.7-88.9 |      | %REC                | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Surr: Nitrobenzene-d5                  | 64.1   | 24.5-126  |      | %REC                | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Surr: 2-Fluorobiphenyl                 | 69.7   | 21.2-129  |      | %REC                | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| Surr: 4-Terphenyl-d14                  | 76.5   | 39.4-107  |      | %REC                | 1  | 9/19/2014 2:06:01 PM  | 15370  |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      | Analyst: <b>RAA</b> |    |                       |        |
| Benzene                                | ND     | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Toluene                                | ND     | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Ethylbenzene                           | 0.54   | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| 1,2,4-Trimethylbenzene                 | 2.9    | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| 1,3,5-Trimethylbenzene                 | 0.98   | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Naphthalene                            | 0.91   | 0.068     |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| 1-Methylnaphthalene                    | 1.0    | 0.14      |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| 2-Methylnaphthalene                    | 2.2    | 0.14      |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Acetone                                | ND     | 0.51      |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Bromobenzene                           | ND     | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 14-16'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 10:50:00 AM

**Lab ID:** 1409812-006

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed         | Batch        |
|------------------------------------|--------|-------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                       | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Bromoform                          | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Bromomethane                       | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 2-Butanone                         | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Carbon disulfide                   | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Carbon tetrachloride               | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Chlorobenzene                      | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Chloroethane                       | ND     | 0.068 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Chloroform                         | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Chloromethane                      | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 2-Chlorotoluene                    | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 4-Chlorotoluene                    | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| cis-1,2-DCE                        | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| cis-1,3-Dichloropropene            | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.068 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Dibromochloromethane               | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Dibromomethane                     | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 1,2-Dichlorobenzene                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 1,3-Dichlorobenzene                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 1,4-Dichlorobenzene                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Dichlorodifluoromethane            | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 1,1-Dichloroethane                 | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 1,1-Dichloroethene                 | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 1,2-Dichloropropane                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 1,3-Dichloropropane                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 2,2-Dichloropropane                | ND     | 0.068 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 1,1-Dichloropropene                | ND     | 0.068 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Hexachlorobutadiene                | ND     | 0.068 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 2-Hexanone                         | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Isopropylbenzene                   | 0.10   | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 4-Isopropyltoluene                 | 0.044  | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 4-Methyl-2-pentanone               | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Methylene chloride                 | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| n-Butylbenzene                     | 0.38   | 0.10  |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| n-Propylbenzene                    | 0.45   | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| sec-Butylbenzene                   | 0.085  | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| Styrene                            | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| tert-Butylbenzene                  | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:12:50 PM | R21306       |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 14-16'

**Project:** GROUP 9

**Collection Date:** 9/16/2014 10:50:00 AM

**Lab ID:** 1409812-006

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed         | Batch  |
|------------------------------------|--------|--------|------|---------------------|----|-----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                       |        |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Tetrachloroethene (PCE)            | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| trans-1,2-DCE                      | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| trans-1,3-Dichloropropene          | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| 1,2,3-Trichlorobenzene             | ND     | 0.068  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| 1,2,4-Trichlorobenzene             | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| 1,1,1-Trichloroethane              | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| 1,1,2-Trichloroethane              | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Trichloroethene (TCE)              | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Trichlorofluoromethane             | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| 1,2,3-Trichloropropane             | ND     | 0.068  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Vinyl chloride                     | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Xylenes, Total                     | 2.3    | 0.068  |      | mg/Kg-dry           | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Surr: Dibromofluoromethane         | 83.8   | 70-130 |      | %REC                | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Surr: 1,2-Dichloroethane-d4        | 84.8   | 70-130 |      | %REC                | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Surr: Toluene-d8                   | 92.4   | 70-130 |      | %REC                | 1  | 9/18/2014 12:12:50 PM | R21306 |
| Surr: 4-Bromofluorobenzene         | 90.1   | 70-130 |      | %REC                | 1  | 9/18/2014 12:12:50 PM | R21306 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 31 of 55 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 DUP01

**Project:** GROUP 9

**Collection Date:** 9/16/2014

**Lab ID:** 1409812-007

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 84     | 11       |      | mg/Kg-dry | 1  | 9/19/2014 1:46:45 AM  | 15340                |
| Motor Oil Range Organics (MRO)                 | ND     | 57       |      | mg/Kg-dry | 1  | 9/19/2014 1:46:45 AM  | 15340                |
| Surr: DNOP                                     | 108    | 57.9-140 |      | %REC      | 1  | 9/19/2014 1:46:45 AM  | 15340                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 30     | 6.9      |      | mg/Kg-dry | 2  | 9/24/2014 3:52:29 AM  | R21377               |
| Surr: BFB                                      | 118    | 80-120   |      | %REC      | 2  | 9/24/2014 3:52:29 AM  | R21377               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 13     | 1.0      |      | wt%       | 1  | 9/17/2014 3:03:00 PM  | R21291               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.093  | 0.039    |      | mg/Kg-dry | 1  | 9/26/2014 11:14:37 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Arsenic                                        | 5.8    | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Barium                                         | 200    | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Beryllium                                      | 0.63   | 0.17     |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Chromium                                       | 12     | 0.34     |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Cobalt                                         | 5.4    | 0.34     |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Lead                                           | 17     | 0.28     |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Nickel                                         | 9.4    | 0.57     |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Vanadium                                       | 27     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| Zinc                                           | 50     | 2.8      |      | mg/Kg-dry | 1  | 9/25/2014 1:29:08 PM  | 15466                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |
| Benzoic acid                                   | ND     | 0.58     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM  | 15370                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409812**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 DUP01

**Project:** GROUP 9

**Collection Date:** 9/16/2014

**Lab ID:** 1409812-007

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.58 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 4-Chloro-3-methylphenol                | ND     | 0.58 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 4-Chloroaniline                        | ND     | 0.58 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 2-Chloronaphthalene                    | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Di-n-butyl phthalate                   | ND     | 0.58 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Di-n-octyl phthalate                   | ND     | 0.46 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.29 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 2,4-Dichlorophenol                     | ND     | 0.46 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 2,4-Dimethylphenol                     | ND     | 0.35 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.58 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 2,4-Dinitrophenol                      | ND     | 0.58 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 2,4-Dinitrotoluene                     | ND     | 0.58 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 2,6-Dinitrotoluene                     | ND     | 0.58 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| Isophorone                             | ND     | 0.58 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 1-Methylnaphthalene                    | 1.1    | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |
| 2-Methylnaphthalene                    | 2.0    | 0.23 |      | mg/Kg-dry | 1  | 9/19/2014 2:35:08 PM | 15370               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-3 DUP01

Project: GROUP 9

Collection Date: 9/16/2014

Lab ID: 1409812-007

Matrix: SOIL

Received Date: 9/17/2014 7:15:00 AM

| Analyses                               | Result | RL        | Qual | Units               | DF | Date Analyzed         | Batch  |
|----------------------------------------|--------|-----------|------|---------------------|----|-----------------------|--------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: <b>DAM</b> |    |                       |        |
| 2-Methylphenol                         | ND     | 0.58      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| 3+4-Methylphenol                       | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| N-Nitrosodi-n-propylamine              | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| N-Nitrosodiphenylamine                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Naphthalene                            | 0.92   | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| 2-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| 3-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| 4-Nitroaniline                         | ND     | 0.46      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Nitrobenzene                           | ND     | 0.58      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| 2-Nitrophenol                          | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| 4-Nitrophenol                          | ND     | 0.29      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Pentachlorophenol                      | ND     | 0.46      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Phenanthrene                           | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Phenol                                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Pyrene                                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Pyridine                               | ND     | 0.58      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| 1,2,4-Trichlorobenzene                 | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| 2,4,5-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| 2,4,6-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry           | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Surr: 2-Fluorophenol                   | 56.9   | 21-111    |      | %REC                | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Surr: Phenol-d5                        | 54.5   | 23.1-117  |      | %REC                | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Surr: 2,4,6-Tribromophenol             | 52.0   | 22.7-88.9 |      | %REC                | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Surr: Nitrobenzene-d5                  | 58.5   | 24.5-126  |      | %REC                | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Surr: 2-Fluorobiphenyl                 | 70.4   | 21.2-129  |      | %REC                | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| Surr: 4-Terphenyl-d14                  | 75.5   | 39.4-107  |      | %REC                | 1  | 9/19/2014 2:35:08 PM  | 15370  |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      | Analyst: <b>RAA</b> |    |                       |        |
| Benzene                                | 0.077  | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Toluene                                | ND     | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Ethylbenzene                           | 0.67   | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| 1,2,4-Trimethylbenzene                 | 3.2    | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| 1,3,5-Trimethylbenzene                 | 1.3    | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Naphthalene                            | 0.93   | 0.069     |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| 1-Methylnaphthalene                    | 0.84   | 0.14      |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| 2-Methylnaphthalene                    | 1.8    | 0.14      |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Acetone                                | ND     | 0.52      |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Bromobenzene                           | ND     | 0.034     |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409812

Date Reported: 10/17/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-3 DUP01

Project: GROUP 9

Collection Date: 9/16/2014

Lab ID: 1409812-007

Matrix: SOIL

Received Date: 9/17/2014 7:15:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed         | Batch        |
|------------------------------------|--------|-------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                       | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Bromoform                          | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Bromomethane                       | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 2-Butanone                         | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Carbon disulfide                   | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Carbon tetrachloride               | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Chlorobenzene                      | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Chloroethane                       | ND     | 0.069 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Chloroform                         | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Chloromethane                      | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 2-Chlorotoluene                    | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 4-Chlorotoluene                    | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| cis-1,2-DCE                        | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| cis-1,3-Dichloropropene            | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.069 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Dibromochloromethane               | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Dibromomethane                     | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 1,2-Dichlorobenzene                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 1,3-Dichlorobenzene                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 1,4-Dichlorobenzene                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Dichlorodifluoromethane            | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 1,1-Dichloroethane                 | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 1,1-Dichloroethene                 | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 1,2-Dichloropropane                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 1,3-Dichloropropane                | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 2,2-Dichloropropane                | ND     | 0.069 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 1,1-Dichloropropene                | ND     | 0.069 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Hexachlorobutadiene                | ND     | 0.069 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 2-Hexanone                         | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Isopropylbenzene                   | 0.10   | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 4-Isopropyltoluene                 | 0.045  | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 4-Methyl-2-pentanone               | ND     | 0.34  |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Methylene chloride                 | ND     | 0.10  |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| n-Butylbenzene                     | 0.32   | 0.10  |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| n-Propylbenzene                    | 0.44   | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| sec-Butylbenzene                   | 0.081  | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| Styrene                            | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| tert-Butylbenzene                  | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.034 |      | mg/Kg-dry | 1  | 9/18/2014 12:40:57 PM | R21306       |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409812**

Date Reported: **10/17/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-3 DUP01

**Project:** GROUP 9

**Collection Date:** 9/16/2014

**Lab ID:** 1409812-007

**Matrix:** SOIL

**Received Date:** 9/17/2014 7:15:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed         | Batch  |
|------------------------------------|--------|--------|------|---------------------|----|-----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                       |        |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Tetrachloroethene (PCE)            | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| trans-1,2-DCE                      | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| trans-1,3-Dichloropropene          | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| 1,2,3-Trichlorobenzene             | ND     | 0.069  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| 1,2,4-Trichlorobenzene             | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| 1,1,1-Trichloroethane              | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| 1,1,2-Trichloroethane              | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Trichloroethene (TCE)              | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Trichlorofluoromethane             | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| 1,2,3-Trichloropropane             | ND     | 0.069  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Vinyl chloride                     | ND     | 0.034  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Xylenes, Total                     | 2.1    | 0.069  |      | mg/Kg-dry           | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Surr: Dibromofluoromethane         | 92.9   | 70-130 |      | %REC                | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Surr: 1,2-Dichloroethane-d4        | 92.3   | 70-130 |      | %REC                | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Surr: Toluene-d8                   | 85.1   | 70-130 |      | %REC                | 1  | 9/18/2014 12:40:57 PM | R21306 |
| Surr: 4-Bromofluorobenzene         | 97.8   | 70-130 |      | %REC                | 1  | 9/18/2014 12:40:57 PM | R21306 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com  
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140919031  
**Project Name:** 1409812

## Analytical Results Report

**Sample Number** 140919031-001 **Sampling Date** 9/15/2014 **Date/Time Received** 9/19/2014 12:30 PM  
**Client Sample ID** 1409812-001C / SWMU 14-4 0-0.5 **Sampling Time** 3:30 PM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.263 | 9/29/2014     | CRW     | EPA 335.4 |           |
| %moisture | 6      | Percent |       | 9/30/2014     | KJS     | %moisture |           |

**Sample Number** 140919031-002 **Sampling Date** 9/15/2014 **Date/Time Received** 9/19/2014 12:30 PM  
**Client Sample ID** 1409812-002C / SWMU 14-4 0.5-2.0 **Sampling Time** 4:00 PM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.275 | 9/29/2014     | CRW     | EPA 335.4 |           |
| %moisture | 7      | Percent |       | 9/30/2014     | KJS     | %moisture |           |

**Sample Number** 140919031-003 **Sampling Date** 9/16/2014 **Date/Time Received** 9/19/2014 12:30 PM  
**Client Sample ID** 1409812-003C / SWMU 14-3 0-0.5 **Sampling Time** 9:55 AM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.286 | 9/29/2014     | CRW     | EPA 335.4 |           |
| %moisture | 9.7    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

**Sample Number** 140919031-004 **Sampling Date** 9/16/2014 **Date/Time Received** 9/19/2014 12:30 PM  
**Client Sample ID** 1409812-004C / SWMU 14-3 0.5-2.0 **Sampling Time** 10:15 AM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.265 | 9/29/2014     | CRW     | EPA 335.4 |           |
| %moisture | 12.2   | Percent |       | 9/30/2014     | KJS     | %moisture |           |

# Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com  
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140919031  
**Project Name:** 1409812

## Analytical Results Report

|                         |                              |                        |           |                           |                    |
|-------------------------|------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140919031-005                | <b>Sampling Date</b>   | 9/15/2014 | <b>Date/Time Received</b> | 9/19/2014 12:30 PM |
| <b>Client Sample ID</b> | 1409812-005C / SWMU 14-3 4-6 |                        |           | <b>Sampling Time</b>      | 10:40 AM           |
| <b>Matrix</b>           | Soil                         | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                              |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.281 | 9/29/2014     | CRW     | EPA 335.4 |           |
| %moisture | 9.6    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

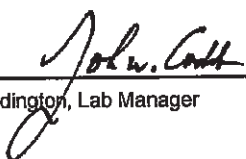
|                         |                                |                        |           |                           |                    |
|-------------------------|--------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140919031-006                  | <b>Sampling Date</b>   | 9/16/2014 | <b>Date/Time Received</b> | 9/19/2014 12:30 PM |
| <b>Client Sample ID</b> | 1409812-006C / SWMU 14-3 14-16 |                        |           | <b>Sampling Time</b>      | 10:50 AM           |
| <b>Matrix</b>           | Soil                           | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.236 | 9/29/2014     | CRW     | EPA 335.4 |           |
| %moisture | 5.7    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

|                         |                                |                        |           |                           |                    |
|-------------------------|--------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140919031-007                  | <b>Sampling Date</b>   | 9/16/2014 | <b>Date/Time Received</b> | 9/19/2014 12:30 PM |
| <b>Client Sample ID</b> | 1409812-007C / SWMU 14-3 DUP01 |                        |           | <b>Sampling Time</b>      |                    |
| <b>Matrix</b>           | Soil                           | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.276 | 9/29/2014     | CRW     | EPA 335.4 |           |
| %moisture | 12     | Percent |       | 9/30/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level  
ND Not Detected  
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.  
The results reported relate only to the samples indicated.  
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:Cert0028; NM: ID00013; OR:ID200001-002; WA:C565  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Monday, October 06, 2014

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# Anatek Labs, Inc.

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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140919031  
**Project Name:** 1409812

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|-----------|---------------|
| Cyanide   | 0.502      | mg/kg | 0.5       | 100.4 | 90-110  | 9/29/2014 | 9/29/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|------|---------|-----------|---------------|
| 140919031-005 | Cyanide   | ND            | 12.7      | mg/kg | 14.1     | 90.1 | 90-110  | 9/29/2014 | 9/29/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 13.2       | mg/kg | 14.1      | 93.6 | 3.9  | 0-25    | 9/29/2014 | 9/29/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 9/29/2014 | 9/29/2014     |

AR Acceptable Range  
ND Not Detected  
PQL Practical Quantitation Limit  
RPD Relative Percentage Difference

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Monday, October 06, 2014

Page 1 of 1

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |     |                          |             |                                                   |          |              |      |          |      |
|--------------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | MB-15340  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                     | PBS       |     | Batch ID: 15340          |             | RunNo: 21269                                      |          |              |      |          |      |
| Prep Date:                     | 9/17/2014 |     | Analysis Date: 9/18/2014 |             | SeqNo: 621307                                     |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10  |                          |             |                                                   |          |              |      |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50  |                          |             |                                                   |          |              |      |          |      |
| Surr: DNOP                     | 8.0       |     | 10.00                    |             | 80.4                                              | 57.9     | 140          |      |          |      |

|                             |           |     |                          |             |                                                   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15340 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 15340          |             | RunNo: 21269                                      |          |              |      |          |      |
| Prep Date:                  | 9/17/2014 |     | Analysis Date: 9/18/2014 |             | SeqNo: 621571                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 62        | 10  | 50.00                    | 0           | 125                                               | 68.6     | 130          |      |          |      |
| Surr: DNOP                  | 5.2       |     | 5.000                    |             | 104                                               | 57.9     | 140          |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                               |             |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|-------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | MB-15402 MK |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | PBS         |     | Batch ID: R21377         |             | RunNo: 21377                               |          |              |      |          |      |
| Prep Date:                    |             |     | Analysis Date: 9/23/2014 |             | SeqNo: 624744                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result      | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND          | 5.0 |                          |             |                                            |          |              |      |          |      |
| Surr: BFB                     | 940         |     | 1000                     |             | 94.0                                       | 80       | 120          |      |          |      |

|                               |              |     |                          |             |                                            |          |              |      |          |      |
|-------------------------------|--------------|-----|--------------------------|-------------|--------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                     | LCS-15402 MK |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS         |     | Batch ID: R21377         |             | RunNo: 21377                               |          |              |      |          |      |
| Prep Date:                    |              |     | Analysis Date: 9/23/2014 |             | SeqNo: 624759                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result       | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26           | 5.0 | 25.00                    | 0           | 104                                        | 65.8     | 139          |      |          |      |
| Surr: BFB                     | 1100         |     | 1000                     |             | 108                                        | 80       | 120          |      |          |      |

### Qualifiers:

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O RSD is greater than RSDlimit  
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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |        |                          |           |             |                                       |          |              |      |          |      |
|--------------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | 5ml-rb | SampType: MBLK           |           |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                     | PBS    | Batch ID: R21306         |           |             | RunNo: 21306                          |          |              |      |          |      |
| Prep Date:                     |        | Analysis Date: 9/18/2014 |           |             | SeqNo: 621766                         |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Toluene                        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Ethylbenzene                   | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Naphthalene                    | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| 1-Methylnaphthalene            | ND     | 0.20                     |           |             |                                       |          |              |      |          |      |
| 2-Methylnaphthalene            | ND     | 0.20                     |           |             |                                       |          |              |      |          |      |
| Acetone                        | ND     | 0.75                     |           |             |                                       |          |              |      |          |      |
| Bromobenzene                   | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromodichloromethane           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromoform                      | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromomethane                   | ND     | 0.15                     |           |             |                                       |          |              |      |          |      |
| 2-Butanone                     | ND     | 0.50                     |           |             |                                       |          |              |      |          |      |
| Carbon disulfide               | ND     | 0.50                     |           |             |                                       |          |              |      |          |      |
| Carbon tetrachloride           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chlorobenzene                  | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chloroethane                   | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| Chloroform                     | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chloromethane                  | ND     | 0.15                     |           |             |                                       |          |              |      |          |      |
| 2-Chlorotoluene                | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 4-Chlorotoluene                | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| cis-1,2-DCE                    | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| Dibromochloromethane           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Dibromomethane                 | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Dichlorodifluoromethane        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethane             | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethene             | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dichloropropane            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,3-Dichloropropane            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 2,2-Dichloropropane            | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |                |           |             |                             |          |           |      |          |      |
|-----------------------------|--------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                   | 5ml-rb | SampType:      | MBLK      | TestCode:   | EPA Method 8260B: Volatiles |          |           |      |          |      |
| Client ID:                  | PBS    | Batch ID:      | R21306    | RunNo:      | 21306                       |          |           |      |          |      |
| Prep Date:                  |        | Analysis Date: | 9/18/2014 | SeqNo:      | 621766                      | Units:   | mg/Kg     |      |          |      |
| Analyte                     | Result | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1-Dichloropropene         | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Hexachlorobutadiene         | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| 2-Hexanone                  | ND     | 0.50           |           |             |                             |          |           |      |          |      |
| Isopropylbenzene            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 4-Isopropyltoluene          | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 4-Methyl-2-pentanone        | ND     | 0.50           |           |             |                             |          |           |      |          |      |
| Methylene chloride          | ND     | 0.15           |           |             |                             |          |           |      |          |      |
| n-Butylbenzene              | ND     | 0.15           |           |             |                             |          |           |      |          |      |
| n-Propylbenzene             | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| sec-Butylbenzene            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Styrene                     | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| tert-Butylbenzene           | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Tetrachloroethene (PCE)     | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| trans-1,2-DCE               | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| trans-1,3-Dichloropropene   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichlorobenzene      | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| 1,2,4-Trichlorobenzene      | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,1-Trichloroethane       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,2-Trichloroethane       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Trichloroethene (TCE)       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Trichlorofluoromethane      | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichloropropane      | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Vinyl chloride              | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Xylenes, Total              | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Surr: Dibromofluoromethane  | 0.47   |                | 0.5000    |             | 93.9                        | 70       | 130       |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.46   |                | 0.5000    |             | 91.6                        | 70       | 130       |      |          |      |
| Surr: Toluene-d8            | 0.44   |                | 0.5000    |             | 88.8                        | 70       | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.46   |                | 0.5000    |             | 91.7                        | 70       | 130       |      |          |      |

|               |           |                |           |             |                             |          |           |      |          |      |
|---------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID     | 100ng lcs | SampType:      | LCS       | TestCode:   | EPA Method 8260B: Volatiles |          |           |      |          |      |
| Client ID:    | LCSS      | Batch ID:      | R21306    | RunNo:      | 21306                       |          |           |      |          |      |
| Prep Date:    |           | Analysis Date: | 9/18/2014 | SeqNo:      | 621768                      | Units:   | mg/Kg     |      |          |      |
| Analyte       | Result    | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene       | 0.97      | 0.050          | 1.000     | 0           | 97.5                        | 70       | 130       |      |          |      |
| Toluene       | 0.99      | 0.050          | 1.000     | 0           | 99.1                        | 70       | 130       |      |          |      |
| Chlorobenzene | 0.98      | 0.050          | 1.000     | 0           | 98.4                        | 70       | 130       |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID <b>100ng lcs</b>  | SampType: <b>LCS</b>            |       |           | TestCode: <b>EPA Method 8260B: Volatiles</b> |      |                     |           |      |          |      |
|-----------------------------|---------------------------------|-------|-----------|----------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>      | Batch ID: <b>R21306</b>         |       |           | RunNo: <b>21306</b>                          |      |                     |           |      |          |      |
| Prep Date:                  | Analysis Date: <b>9/18/2014</b> |       |           | SeqNo: <b>621768</b>                         |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                     | Result                          | PQL   | SPK value | SPK Ref Val                                  | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 1.1                             | 0.050 | 1.000     | 0                                            | 110  | 60.5                | 160       |      |          |      |
| Trichloroethene (TCE)       | 0.99                            | 0.050 | 1.000     | 0                                            | 99.5 | 58.8                | 139       |      |          |      |
| Surr: Dibromofluoromethane  | 0.46                            |       | 0.5000    |                                              | 91.7 | 70                  | 130       |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.46                            |       | 0.5000    |                                              | 92.3 | 70                  | 130       |      |          |      |
| Surr: Toluene-d8            | 0.45                            |       | 0.5000    |                                              | 89.7 | 70                  | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.43                            |       | 0.5000    |                                              | 86.8 | 70                  | 130       |      |          |      |

| Sample ID <b>1409812-004a ms</b>     | SampType: <b>MS</b>             |       |           | TestCode: <b>EPA Method 8260B: Volatiles</b> |      |                         |           |      |          |      |
|--------------------------------------|---------------------------------|-------|-----------|----------------------------------------------|------|-------------------------|-----------|------|----------|------|
| Client ID: <b>SWMU 14-3 0.5-2.0'</b> | Batch ID: <b>R21306</b>         |       |           | RunNo: <b>21306</b>                          |      |                         |           |      |          |      |
| Prep Date:                           | Analysis Date: <b>9/18/2014</b> |       |           | SeqNo: <b>621770</b>                         |      | Units: <b>mg/Kg-dry</b> |           |      |          |      |
| Analyte                              | Result                          | PQL   | SPK value | SPK Ref Val                                  | %REC | LowLimit                | HighLimit | %RPD | RPDLimit | Qual |
| Benzene                              | 0.82                            | 0.035 | 0.7068    | 0.06315                                      | 108  | 32.2                    | 145       |      |          |      |
| Toluene                              | 0.76                            | 0.035 | 0.7068    | 0.005697                                     | 107  | 29.1                    | 139       |      |          |      |
| Chlorobenzene                        | 0.80                            | 0.035 | 0.7068    | 0                                            | 113  | 32.4                    | 142       |      |          |      |
| 1,1-Dichloroethene                   | 0.83                            | 0.035 | 0.7068    | 0                                            | 117  | 32.6                    | 155       |      |          |      |
| Trichloroethene (TCE)                | 0.68                            | 0.035 | 0.7068    | 0                                            | 96.8 | 29.2                    | 150       |      |          |      |
| Surr: Dibromofluoromethane           | 0.31                            |       | 0.3534    |                                              | 88.3 | 70                      | 130       |      |          |      |
| Surr: 1,2-Dichloroethane-d4          | 0.30                            |       | 0.3534    |                                              | 85.5 | 70                      | 130       |      |          |      |
| Surr: Toluene-d8                     | 0.31                            |       | 0.3534    |                                              | 89.1 | 70                      | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene           | 0.34                            |       | 0.3534    |                                              | 95.8 | 70                      | 130       |      |          |      |

| Sample ID <b>1409812-004a msd</b>    | SampType: <b>MSD</b>            |       |           | TestCode: <b>EPA Method 8260B: Volatiles</b> |      |                         |           |      |          |      |
|--------------------------------------|---------------------------------|-------|-----------|----------------------------------------------|------|-------------------------|-----------|------|----------|------|
| Client ID: <b>SWMU 14-3 0.5-2.0'</b> | Batch ID: <b>R21306</b>         |       |           | RunNo: <b>21306</b>                          |      |                         |           |      |          |      |
| Prep Date:                           | Analysis Date: <b>9/18/2014</b> |       |           | SeqNo: <b>621771</b>                         |      | Units: <b>mg/Kg-dry</b> |           |      |          |      |
| Analyte                              | Result                          | PQL   | SPK value | SPK Ref Val                                  | %REC | LowLimit                | HighLimit | %RPD | RPDLimit | Qual |
| Benzene                              | 0.79                            | 0.035 | 0.7068    | 0.06315                                      | 103  | 32.2                    | 145       | 3.86 | 20       |      |
| Toluene                              | 0.74                            | 0.035 | 0.7068    | 0.005697                                     | 104  | 29.1                    | 139       | 3.41 | 20       |      |
| Chlorobenzene                        | 0.76                            | 0.035 | 0.7068    | 0                                            | 108  | 32.4                    | 142       | 4.36 | 20       |      |
| 1,1-Dichloroethene                   | 0.73                            | 0.035 | 0.7068    | 0                                            | 103  | 32.6                    | 155       | 12.8 | 20       |      |
| Trichloroethene (TCE)                | 0.67                            | 0.035 | 0.7068    | 0                                            | 94.3 | 29.2                    | 150       | 2.67 | 20       |      |
| Surr: Dibromofluoromethane           | 0.30                            |       | 0.3534    |                                              | 85.7 | 70                      | 130       | 0    | 0        |      |
| Surr: 1,2-Dichloroethane-d4          | 0.30                            |       | 0.3534    |                                              | 85.5 | 70                      | 130       | 0    | 0        |      |
| Surr: Toluene-d8                     | 0.31                            |       | 0.3534    |                                              | 89.1 | 70                      | 130       | 0    | 0        |      |
| Surr: 4-Bromofluorobenzene           | 0.35                            |       | 0.3534    |                                              | 100  | 70                      | 130       | 0    | 0        |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |        |                |           |             |                             |          |           |      |          |      |
|--------------------------------|--------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                      | 5ml rb | SampType:      | MBLK      | TestCode:   | EPA Method 8260B: Volatiles |          |           |      |          |      |
| Client ID:                     | PBS    | Batch ID:      | R21361    | RunNo:      | 21361                       |          |           |      |          |      |
| Prep Date:                     |        | Analysis Date: | 9/22/2014 | SeqNo:      | 623892                      | Units:   | mg/Kg     |      |          |      |
| Analyte                        | Result | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene                        | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Toluene                        | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Ethylbenzene                   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2,4-Trimethylbenzene         | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,3,5-Trimethylbenzene         | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Naphthalene                    | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| 1-Methylnaphthalene            | ND     | 0.20           |           |             |                             |          |           |      |          |      |
| 2-Methylnaphthalene            | ND     | 0.20           |           |             |                             |          |           |      |          |      |
| Acetone                        | ND     | 0.75           |           |             |                             |          |           |      |          |      |
| Bromobenzene                   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Bromodichloromethane           | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Bromoform                      | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Bromomethane                   | ND     | 0.15           |           |             |                             |          |           |      |          |      |
| 2-Butanone                     | ND     | 0.50           |           |             |                             |          |           |      |          |      |
| Carbon disulfide               | ND     | 0.50           |           |             |                             |          |           |      |          |      |
| Carbon tetrachloride           | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Chlorobenzene                  | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Chloroethane                   | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Chloroform                     | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Chloromethane                  | ND     | 0.15           |           |             |                             |          |           |      |          |      |
| 2-Chlorotoluene                | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 4-Chlorotoluene                | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| cis-1,2-DCE                    | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| cis-1,3-Dichloropropene        | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Dibromochloromethane           | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Dibromomethane                 | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dichlorobenzene            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,3-Dichlorobenzene            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,4-Dichlorobenzene            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Dichlorodifluoromethane        | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1-Dichloroethane             | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1-Dichloroethene             | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dichloropropane            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,3-Dichloropropane            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 2,2-Dichloropropane            | ND     | 0.10           |           |             |                             |          |           |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |                          |           |             |                                       |          |              |      |          |      |
|-----------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | 5ml rb | SampType: MBLK           |           |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                  | PBS    | Batch ID: R21361         |           |             | RunNo: 21361                          |          |              |      |          |      |
| Prep Date:                  |        | Analysis Date: 9/22/2014 |           |             | SeqNo: 623892                         |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 1,1-Dichloropropene         | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| Hexachlorobutadiene         | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| 2-Hexanone                  | ND     | 0.50                     |           |             |                                       |          |              |      |          |      |
| Isopropylbenzene            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 4-Isopropyltoluene          | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 4-Methyl-2-pentanone        | ND     | 0.50                     |           |             |                                       |          |              |      |          |      |
| Methylene chloride          | ND     | 0.15                     |           |             |                                       |          |              |      |          |      |
| n-Butylbenzene              | ND     | 0.15                     |           |             |                                       |          |              |      |          |      |
| n-Propylbenzene             | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| sec-Butylbenzene            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Styrene                     | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| tert-Butylbenzene           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Tetrachloroethene (PCE)     | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| trans-1,2-DCE               | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| trans-1,3-Dichloropropene   | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2,3-Trichlorobenzene      | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| 1,2,4-Trichlorobenzene      | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,1,1-Trichloroethane       | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,1,2-Trichloroethane       | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Trichloroethene (TCE)       | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Trichlorofluoromethane      | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2,3-Trichloropropane      | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| Vinyl chloride              | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Xylenes, Total              | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| mp-Xylenes                  | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| o-Xylene                    | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Surr: Dibromofluoromethane  | 0.48   |                          | 0.5000    |             | 95.2                                  | 70       | 130          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.46   |                          | 0.5000    |             | 92.7                                  | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.46   |                          | 0.5000    |             | 92.5                                  | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.45   |                          | 0.5000    |             | 90.5                                  | 70       | 130          |      |          |      |

|            |                   |                          |           |             |                                       |          |              |      |          |      |
|------------|-------------------|--------------------------|-----------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | 100nglcs,200ngann | SampType: LCS            |           |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID: | LCSS              | Batch ID: R21361         |           |             | RunNo: 21361                          |          |              |      |          |      |
| Prep Date: |                   | Analysis Date: 9/22/2014 |           |             | SeqNo: 623893                         |          | Units: mg/Kg |      |          |      |
| Analyte    | Result            | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene    | 1.1               | 0.050                    | 1.000     | 0           | 113                                   | 70       | 130          |      |          |      |

### Qualifiers:

|   |                                                 |    |                                                    |
|---|-------------------------------------------------|----|----------------------------------------------------|
| * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
| E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
| O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
| R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
| S | Spike Recovery outside accepted recovery limits |    |                                                    |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                             |                   |       |                          |             |                                       |          |              |      |          |      |
|-----------------------------|-------------------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | 100nglcs,200ngann |       | SampType: LCS            |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                  | LCSS              |       | Batch ID: R21361         |             | RunNo: 21361                          |          |              |      |          |      |
| Prep Date:                  |                   |       | Analysis Date: 9/22/2014 |             | SeqNo: 623893                         |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result            | PQL   | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Toluene                     | 1.0               | 0.050 | 1.000                    | 0           | 101                                   | 70       | 130          |      |          |      |
| Chlorobenzene               | 1.0               | 0.050 | 1.000                    | 0           | 102                                   | 70       | 130          |      |          |      |
| 1,1-Dichloroethene          | 1.1               | 0.050 | 1.000                    | 0           | 111                                   | 60.5     | 160          |      |          |      |
| Trichloroethene (TCE)       | 1.1               | 0.050 | 1.000                    | 0           | 108                                   | 58.8     | 139          |      |          |      |
| Surr: Dibromofluoromethane  | 0.47              |       | 0.5000                   |             | 93.8                                  | 70       | 130          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.46              |       | 0.5000                   |             | 92.2                                  | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.44              |       | 0.5000                   |             | 87.5                                  | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.45              |       | 0.5000                   |             | 89.7                                  | 70       | 130          |      |          |      |

|                             |                  |       |                          |             |                                       |          |                  |      |          |      |
|-----------------------------|------------------|-------|--------------------------|-------------|---------------------------------------|----------|------------------|------|----------|------|
| Sample ID                   | 1409812-003ams   |       | SampType: MS             |             | TestCode: EPA Method 8260B: Volatiles |          |                  |      |          |      |
| Client ID:                  | SWMU 14-3 0-0.5' |       | Batch ID: R21361         |             | RunNo: 21396                          |          |                  |      |          |      |
| Prep Date:                  |                  |       | Analysis Date: 9/23/2014 |             | SeqNo: 625105                         |          | Units: mg/Kg-dry |      |          |      |
| Analyte                     | Result           | PQL   | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Benzene                     | 0.79             | 0.037 | 0.7400                   | 0           | 106                                   | 32.2     | 145              |      |          |      |
| Toluene                     | 0.85             | 0.037 | 0.7400                   | 0.03905     | 109                                   | 29.1     | 139              |      |          |      |
| Chlorobenzene               | 0.85             | 0.037 | 0.7400                   | 0           | 115                                   | 32.4     | 142              |      |          |      |
| 1,1-Dichloroethene          | 0.77             | 0.037 | 0.7400                   | 0           | 104                                   | 32.6     | 155              |      |          |      |
| Trichloroethene (TCE)       | 0.76             | 0.037 | 0.7400                   | 0           | 102                                   | 29.2     | 150              |      |          |      |
| Surr: Dibromofluoromethane  | 0.38             |       | 0.3700                   |             | 103                                   | 70       | 130              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.34             |       | 0.3700                   |             | 92.2                                  | 70       | 130              |      |          |      |
| Surr: Toluene-d8            | 0.33             |       | 0.3700                   |             | 89.9                                  | 70       | 130              |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.30             |       | 0.3700                   |             | 80.1                                  | 70       | 130              |      |          |      |

|                             |                          |       |           |               |        |          |                                       |        |          |      |  |
|-----------------------------|--------------------------|-------|-----------|---------------|--------|----------|---------------------------------------|--------|----------|------|--|
| Sample ID                   | 1409812-003amsd          |       |           | SampType:     | MSD    |          | TestCode: EPA Method 8260B: Volatiles |        |          |      |  |
| Client ID:                  | SWMU 14-3 0-0.5'         |       |           | Batch ID:     | R21361 |          | RunNo: 21396                          |        |          |      |  |
| Prep Date:                  | Analysis Date: 9/23/2014 |       |           | SeqNo: 625106 |        |          | Units: mg/Kg-dry                      |        |          |      |  |
| Analyte                     | Result                   | PQL   | SPK value | SPK Ref Val   | %REC   | LowLimit | HighLimit                             | %RPD   | RPDLimit | Qual |  |
| Benzene                     | 0.77                     | 0.037 | 0.7400    | 0             | 104    | 32.2     | 145                                   | 1.71   | 20       |      |  |
| Toluene                     | 0.77                     | 0.037 | 0.7400    | 0.03905       | 99.0   | 29.1     | 139                                   | 9.61   | 20       |      |  |
| Chlorobenzene               | 0.78                     | 0.037 | 0.7400    | 0             | 105    | 32.4     | 142                                   | 8.95   | 20       |      |  |
| 1,1-Dichloroethene          | 0.77                     | 0.037 | 0.7400    | 0             | 105    | 32.6     | 155                                   | 1.15   | 20       |      |  |
| Trichloroethene (TCE)       | 0.76                     | 0.037 | 0.7400    | 0             | 102    | 29.2     | 150                                   | 0.0743 | 20       |      |  |
| Surr: Dibromofluoromethane  | 0.35                     |       | 0.3700    |               | 95.2   | 70       | 130                                   | 0      | 0        |      |  |
| Surr: 1,2-Dichloroethane-d4 | 0.31                     |       | 0.3700    |               | 83.4   | 70       | 130                                   | 0      | 0        |      |  |
| Surr: Toluene-d8            | 0.31                     |       | 0.3700    |               | 83.6   | 70       | 130                                   | 0      | 0        |      |  |
| Surr: 4-Bromofluorobenzene  | 0.32                     |       | 0.3700    |               | 86.7   | 70       | 130                                   | 0      | 0        |      |  |

### Qualifiers:

- |                                                   |                                                      |
|---------------------------------------------------|------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |                                                      |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |                |           |             |                                 |          |           |      |          |      |
|--------------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                      | mb-15395  | SampType:      | MBLK      | TestCode:   | Method 8260B/5035LOW: VOLATILES |          |           |      |          |      |
| Client ID:                     | PBS       | Batch ID:      | 15395     | RunNo:      | 21329                           |          |           |      |          |      |
| Prep Date:                     | 9/19/2014 | Analysis Date: | 9/19/2014 | SeqNo:      | 622701                          | Units:   | mg/Kg     |      |          |      |
| Analyte                        | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Toluene                        | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Ethylbenzene                   | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Xylenes, Total                 | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Naphthalene                    | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400        |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400        |           |             |                                 |          |           |      |          |      |
| Acetone                        | ND        | 0.0100         |           |             |                                 |          |           |      |          |      |
| Bromobenzene                   | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Bromodichloromethane           | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Bromoform                      | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Bromomethane                   | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 2-Butanone                     | ND        | 0.0100         |           |             |                                 |          |           |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Chlorobenzene                  | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Chloroethane                   | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Chloroform                     | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Chloromethane                  | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Carbon disulfide               | ND        | 0.0100         |           |             |                                 |          |           |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Dibromochloromethane           | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Dibromomethane                 | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200        |           |             |                                 |          |           |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |         |                |                  |      |           |                                        |      |                     |      |
|-----------------------------|------------------|---------|----------------|------------------|------|-----------|----------------------------------------|------|---------------------|------|
| Sample ID                   | <b>mb-15395</b>  |         | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>Method 8260B/5035LOW: VOLATILES</b> |      |                     |      |
| Client ID:                  | <b>PBS</b>       |         | Batch ID:      | <b>15395</b>     |      | RunNo:    | <b>21329</b>                           |      |                     |      |
| Prep Date:                  | <b>9/19/2014</b> |         | Analysis Date: | <b>9/19/2014</b> |      | SeqNo:    | <b>622701</b>                          |      | Units: <b>mg/Kg</b> |      |
| Analyte                     | Result           | PQL     | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                              | %RPD | RPDLimit            | Qual |
| 2,2-Dichloropropane         | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1-Dichloropropene         | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Hexachlorobutadiene         | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Isopropylbenzene            | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 4-Isopropyltoluene          | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Methylene chloride          | 0.00818          | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| n-Butylbenzene              | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 2-Hexanone                  | ND               | 0.0100  |                |                  |      |           |                                        |      |                     |      |
| n-Propylbenzene             | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| sec-Butylbenzene            | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Styrene                     | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 4-Methyl-2-pentanone        | ND               | 0.0100  |                |                  |      |           |                                        |      |                     |      |
| tert-Butylbenzene           | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,1,2-Tetrachloroethane   | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,2,2-Tetrachloroethane   | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Tetrachloroethene (PCE)     | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| trans-1,2-DCE               | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| trans-1,3-Dichloropropene   | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,2,3-Trichlorobenzene      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,2,4-Trichlorobenzene      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,1-Trichloroethane       | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,1,2-Trichloroethane       | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Trichloroethene (TCE)       | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Trichlorofluoromethane      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| 1,2,3-Trichloropropane      | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Vinyl chloride              | ND               | 0.00200 |                |                  |      |           |                                        |      |                     |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0199           |         | 0.02000        |                  | 99.5 | 70        | 130                                    |      |                     |      |
| Surr: 4-Bromofluorobenzene  | 0.0253           |         | 0.02000        |                  | 126  | 65.3      | 135                                    |      |                     |      |
| Surr: Dibromofluoromethane  | 0.0181           |         | 0.02000        |                  | 90.5 | 70        | 130                                    |      |                     |      |
| Surr: Toluene-d8            | 0.0196           |         | 0.02000        |                  | 98.1 | 70        | 130                                    |      |                     |      |

|               |                  |         |                |                  |      |           |                                        |      |                     |      |
|---------------|------------------|---------|----------------|------------------|------|-----------|----------------------------------------|------|---------------------|------|
| Sample ID     | <b>ics-15395</b> |         | SampType:      | <b>LCS</b>       |      | TestCode: | <b>Method 8260B/5035LOW: VOLATILES</b> |      |                     |      |
| Client ID:    | <b>LCSS</b>      |         | Batch ID:      | <b>15395</b>     |      | RunNo:    | <b>21329</b>                           |      |                     |      |
| Prep Date:    | <b>9/19/2014</b> |         | Analysis Date: | <b>9/19/2014</b> |      | SeqNo:    | <b>622703</b>                          |      | Units: <b>mg/Kg</b> |      |
| Analyte       | Result           | PQL     | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                              | %RPD | RPDLimit            | Qual |
| Benzene       | 0.0102           | 0.00200 | 0.01000        | 0                | 102  | 70        | 130                                    |      |                     |      |
| Toluene       | 0.0105           | 0.00200 | 0.01000        | 0                | 105  | 70        | 130                                    |      |                     |      |
| Chlorobenzene | 0.0104           | 0.00200 | 0.01000        | 0                | 104  | 70        | 130                                    |      |                     |      |

### Qualifiers:

|   |                                                 |    |                                                    |
|---|-------------------------------------------------|----|----------------------------------------------------|
| * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
| E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
| O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
| R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
| S | Spike Recovery outside accepted recovery limits |    |                                                    |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | Ics-15395 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | LCSS      |         | Batch ID: 15395          |             | RunNo: 21329                              |          |              |      |          |      |
| Prep Date:                  | 9/19/2014 |         | Analysis Date: 9/19/2014 |             | SeqNo: 622703                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.00928   | 0.00200 | 0.01000                  | 0           | 92.8                                      | 70       | 130          |      |          |      |
| Trichloroethene (TCE)       | 0.00987   | 0.00200 | 0.01000                  | 0           | 98.7                                      | 61.6     | 131          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0198    |         | 0.02000                  |             | 98.9                                      | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0231    |         | 0.02000                  |             | 116                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0185    |         | 0.02000                  |             | 92.6                                      | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0202    |         | 0.02000                  |             | 101                                       | 70       | 130          |      |          |      |

|                             |                  |         |                          |             |                                           |          |                  |      |          |      |
|-----------------------------|------------------|---------|--------------------------|-------------|-------------------------------------------|----------|------------------|------|----------|------|
| Sample ID                   | 1409812-001ams   |         | SampType: MS             |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |                  |      |          |      |
| Client ID:                  | SWMU 14-4 0-0.5' |         | Batch ID: 15395          |             | RunNo: 21329                              |          |                  |      |          |      |
| Prep Date:                  | 9/19/2014        |         | Analysis Date: 9/19/2014 |             | SeqNo: 622705                             |          | Units: mg/Kg-dry |      |          |      |
| Analyte                     | Result           | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Benzene                     | 0.00461          | 0.00123 | 0.006141                 | 0           | 75.1                                      | 70       | 130              |      |          |      |
| Toluene                     | 0.00444          | 0.00123 | 0.006141                 | 0           | 72.2                                      | 70       | 130              |      |          |      |
| Chlorobenzene               | 0.00455          | 0.00123 | 0.006141                 | 0           | 74.1                                      | 70       | 130              |      |          |      |
| 1,1-Dichloroethene          | 0.00429          | 0.00123 | 0.006141                 | 0           | 69.8                                      | 70       | 130              |      |          | S    |
| Trichloroethene (TCE)       | 0.00451          | 0.00123 | 0.006141                 | 0           | 73.4                                      | 70       | 130              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0139           |         | 0.01228                  |             | 113                                       | 70       | 130              |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0151           |         | 0.01228                  |             | 123                                       | 65.3     | 135              |      |          |      |
| Surr: Dibromofluoromethane  | 0.0124           |         | 0.01228                  |             | 101                                       | 70       | 130              |      |          |      |
| Surr: Toluene-d8            | 0.0122           |         | 0.01228                  |             | 99.7                                      | 70       | 130              |      |          |      |

|                             |                  |         |                |             |       |          |           |                                 |                  |      |  |
|-----------------------------|------------------|---------|----------------|-------------|-------|----------|-----------|---------------------------------|------------------|------|--|
| Sample ID                   | 1409812-001amsd  |         |                | SampType:   | MSD   |          | TestCode: | Method 8260B/5035LOW: VOLATILES |                  |      |  |
| Client ID:                  | SWMU 14-4 0-0.5' |         |                | Batch ID:   | 15395 |          | RunNo:    | 21329                           |                  |      |  |
| Prep Date:                  | 9/19/2014        |         | Analysis Date: | 9/19/2014   |       | SeqNo:   | 622706    |                                 | Units: mg/Kg-dry |      |  |
| Analyte                     | Result           | PQL     | SPK value      | SPK Ref Val | %REC  | LowLimit | HighLimit | %RPD                            | RPDLimit         | Qual |  |
| Benzene                     | 0.00520          | 0.00124 | 0.006205       | 0           | 83.9  | 70       | 130       | 12.1                            | 20               |      |  |
| Toluene                     | 0.00503          | 0.00124 | 0.006205       | 0           | 81.1  | 70       | 130       | 12.6                            | 20               |      |  |
| Chlorobenzene               | 0.00525          | 0.00124 | 0.006205       | 0           | 84.6  | 70       | 130       | 14.2                            | 20               |      |  |
| 1,1-Dichloroethene          | 0.00478          | 0.00124 | 0.006205       | 0           | 77.0  | 70       | 130       | 10.9                            | 20               |      |  |
| Trichloroethene (TCE)       | 0.00506          | 0.00124 | 0.006205       | 0           | 81.5  | 70       | 130       | 11.5                            | 20               |      |  |
| Surr: 1,2-Dichloroethane-d4 | 0.0130           |         | 0.01241        |             | 105   | 70       | 130       | 0                               | 0                |      |  |
| Surr: 4-Bromofluorobenzene  | 0.0145           |         | 0.01241        |             | 117   | 65.3     | 135       | 0                               | 0                |      |  |
| Surr: Dibromofluoromethane  | 0.0115           |         | 0.01241        |             | 92.5  | 70       | 130       | 0                               | 0                |      |  |
| Surr: Toluene-d8            | 0.0125           |         | 0.01241        |             | 100   | 70       | 130       | 0                               | 0                |      |  |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15370  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15370          |             | RunNo: 21328                              |          |              |      |          |      |
| Prep Date:                  | 9/18/2014 |      | Analysis Date: 9/19/2014 |             | SeqNo: 622393                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |                                           |          |              |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |      |                          |             |      |                                           |           |              |          |      |
|----------------------------|-----------|------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                  | mb-15370  |      | SampType: MBLK           |             |      | TestCode: EPA Method 8270C: Semivolatiles |           |              |          |      |
| Client ID:                 | PBS       |      | Batch ID: 15370          |             |      | RunNo: 21328                              |           |              |          |      |
| Prep Date:                 | 9/18/2014 |      | Analysis Date: 9/19/2014 |             |      | SeqNo: 622393                             |           | Units: mg/Kg |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| Fluoranthene               | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Fluorene                   | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Hexachlorobenzene          | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Hexachlorobutadiene        | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Hexachloroethane           | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Isophorone                 | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 1-Methylnaphthalene        | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 2-Methylnaphthalene        | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 2-Methylphenol             | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 3+4-Methylphenol           | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Naphthalene                | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 2-Nitroaniline             | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 3-Nitroaniline             | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 4-Nitroaniline             | ND        | 0.40 |                          |             |      |                                           |           |              |          |      |
| Nitrobenzene               | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 2-Nitrophenol              | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 4-Nitrophenol              | ND        | 0.25 |                          |             |      |                                           |           |              |          |      |
| Pentachlorophenol          | ND        | 0.40 |                          |             |      |                                           |           |              |          |      |
| Phenanthrene               | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Phenol                     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Pyrene                     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Pyridine                   | ND        | 0.50 |                          |             |      |                                           |           |              |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20 |                          |             |      |                                           |           |              |          |      |
| Surr: 2-Fluorophenol       | 1.9       |      | 3.330                    |             | 58.4 | 21                                        | 111       |              |          |      |
| Surr: Phenol-d5            | 2.3       |      | 3.330                    |             | 69.7 | 23.1                                      | 117       |              |          |      |
| Surr: 2,4,6-Tribromophenol | 2.4       |      | 3.330                    |             | 70.8 | 22.7                                      | 88.9      |              |          |      |
| Surr: Nitrobenzene-d5      | 1.1       |      | 1.670                    |             | 67.3 | 24.5                                      | 126       |              |          |      |
| Surr: 2-Fluorobiphenyl     | 1.2       |      | 1.670                    |             | 74.2 | 21.2                                      | 129       |              |          |      |
| Surr: 4-Terphenyl-d14      | 1.4       |      | 1.670                    |             | 81.0 | 39.4                                      | 107       |              |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                            |           |      |                          |             |                                           |          |              |      |          |      |
|----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                  | Ics-15370 |      | SampType: LCS            |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15370          |             | RunNo: 21328                              |          |              |      |          |      |
| Prep Date:                 | 9/18/2014 |      | Analysis Date: 9/19/2014 |             | SeqNo: 622394                             |          | Units: mg/Kg |      |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene               | 0.93      | 0.20 | 1.670                    | 0           | 55.4                                      | 50.7     | 110          |      |          |      |
| 4-Chloro-3-methylphenol    | 2.2       | 0.50 | 3.330                    | 0           | 66.9                                      | 47.8     | 107          |      |          |      |
| 2-Chlorophenol             | 2.2       | 0.20 | 3.330                    | 0           | 66.6                                      | 45.7     | 108          |      |          |      |
| 1,4-Dichlorobenzene        | 0.88      | 0.20 | 1.670                    | 0           | 52.7                                      | 46.1     | 112          |      |          |      |
| 2,4-Dinitrotoluene         | 0.80      | 0.50 | 1.670                    | 0           | 47.8                                      | 44.9     | 114          |      |          |      |
| N-Nitrosodi-n-propylamine  | 0.81      | 0.20 | 1.670                    | 0           | 48.5                                      | 38.7     | 128          |      |          |      |
| 4-Nitrophenol              | 1.8       | 0.25 | 3.330                    | 0           | 54.3                                      | 40.2     | 103          |      |          |      |
| Pentachlorophenol          | 1.6       | 0.40 | 3.330                    | 0           | 48.5                                      | 32.9     | 94           |      |          |      |
| Phenol                     | 2.2       | 0.20 | 3.330                    | 0           | 64.8                                      | 44.1     | 109          |      |          |      |
| Pyrene                     | 1.1       | 0.20 | 1.670                    | 0           | 64.3                                      | 51.9     | 109          |      |          |      |
| 1,2,4-Trichlorobenzene     | 0.92      | 0.20 | 1.670                    | 0           | 55.3                                      | 49.5     | 115          |      |          |      |
| Surr: 2-Fluorophenol       | 1.8       |      | 3.330                    |             | 54.4                                      | 21       | 111          |      |          |      |
| Surr: Phenol-d5            | 2.2       |      | 3.330                    |             | 65.8                                      | 23.1     | 117          |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.8       |      | 3.330                    |             | 53.1                                      | 22.7     | 88.9         |      |          |      |
| Surr: Nitrobenzene-d5      | 1.1       |      | 1.670                    |             | 64.4                                      | 24.5     | 126          |      |          |      |
| Surr: 2-Fluorobiphenyl     | 0.96      |      | 1.670                    |             | 57.7                                      | 21.2     | 129          |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.1       |      | 1.670                    |             | 63.7                                      | 39.4     | 107          |      |          |      |

|                            |                  |                          |           |             |                                           |          |                  |      |          |      |
|----------------------------|------------------|--------------------------|-----------|-------------|-------------------------------------------|----------|------------------|------|----------|------|
| Sample ID                  | 1409812-001ams   | SampType: MS             |           |             | TestCode: EPA Method 8270C: Semivolatiles |          |                  |      |          |      |
| Client ID:                 | SWMU 14-4 0-0.5' | Batch ID: 15370          |           |             | RunNo: 21328                              |          |                  |      |          |      |
| Prep Date:                 | 9/18/2014        | Analysis Date: 9/19/2014 |           |             | SeqNo: 622907                             |          | Units: mg/Kg-dry |      |          |      |
| Analyte                    | Result           | PQL                      | SPK value | SPK Ref Val | %REC                                      | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Acenaphthene               | 1.0              | 0.22                     | 1.805     | 0           | 57.8                                      | 53.8     | 92.8             |      |          |      |
| 4-Chloro-3-methylphenol    | 2.3              | 0.54                     | 3.600     | 0           | 63.0                                      | 34.9     | 104              |      |          |      |
| 2-Chlorophenol             | 2.0              | 0.22                     | 3.600     | 0           | 54.7                                      | 18.2     | 105              |      |          |      |
| 1,4-Dichlorobenzene        | 0.82             | 0.22                     | 1.805     | 0           | 45.4                                      | 18.1     | 112              |      |          |      |
| 2,4-Dinitrotoluene         | 0.89             | 0.54                     | 1.805     | 0           | 49.2                                      | 22       | 144              |      |          |      |
| N-Nitrosodi-n-propylamine  | 0.97             | 0.22                     | 1.805     | 0           | 53.8                                      | 58.6     | 101              |      |          | S    |
| 4-Nitrophenol              | 2.1              | 0.27                     | 3.600     | 0           | 59.5                                      | 13.7     | 127              |      |          |      |
| Pentachlorophenol          | 1.9              | 0.43                     | 3.600     | 0           | 52.4                                      | 16.5     | 107              |      |          |      |
| Phenol                     | 2.0              | 0.22                     | 3.600     | 0           | 56.8                                      | 12.5     | 114              |      |          |      |
| Pyrene                     | 1.1              | 0.22                     | 1.805     | 0           | 59.9                                      | 14.2     | 116              |      |          |      |
| 1,2,4-Trichlorobenzene     | 0.92             | 0.22                     | 1.805     | 0           | 51.2                                      | 16       | 125              |      |          |      |
| Surr: 2-Fluorophenol       | 1.8              |                          | 3.600     |             | 49.0                                      | 21       | 111              |      |          |      |
| Surr: Phenol-d5            | 2.0              |                          | 3.600     |             | 55.4                                      | 23.1     | 117              |      |          |      |
| Surr: 2,4,6-Tribromophenol | 2.0              |                          | 3.600     |             | 55.5                                      | 22.7     | 88.9             |      |          |      |
| Surr: Nitrobenzene-d5      | 1.0              |                          | 1.805     |             | 56.1                                      | 24.5     | 126              |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.1              |                          | 1.805     |             | 62.5                                      | 21.2     | 129              |      |          |      |

### Qualifiers:

- |                                                   |                                                      |
|---------------------------------------------------|------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |                                                      |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                       |                  |                |           |             |                                 |          |           |      |          |      |
|-----------------------|------------------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID             | 1409812-001ams   | SampType:      | MS        | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:            | SWMU 14-4 0-0.5' | Batch ID:      | 15370     | RunNo:      | 21328                           |          |           |      |          |      |
| Prep Date:            | 9/18/2014        | Analysis Date: | 9/19/2014 | SeqNo:      | 622907                          | Units:   | mg/Kg-dry |      |          |      |
| Analyte               | Result           | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Terphenyl-d14 | 1.1              |                | 1.805     |             | 58.9                            | 39.4     | 107       |      |          |      |

|                            |                  |                |           |             |                                 |          |           |        |          |      |
|----------------------------|------------------|----------------|-----------|-------------|---------------------------------|----------|-----------|--------|----------|------|
| Sample ID                  | 1409812-001amsd  | SampType:      | MSD       | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |        |          |      |
| Client ID:                 | SWMU 14-4 0-0.5' | Batch ID:      | 15370     | RunNo:      | 21328                           |          |           |        |          |      |
| Prep Date:                 | 9/18/2014        | Analysis Date: | 9/19/2014 | SeqNo:      | 622908                          | Units:   | mg/Kg-dry |        |          |      |
| Analyte                    | Result           | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD   | RPDLimit | Qual |
| Acenaphthene               | 1.1              | 0.22           | 1.808     | 0           | 62.9                            | 53.8     | 92.8      | 8.60   | 22       |      |
| 4-Chloro-3-methylphenol    | 2.7              | 0.54           | 3.606     | 0           | 75.5                            | 34.9     | 104       | 18.1   | 27.3     |      |
| 2-Chlorophenol             | 2.3              | 0.22           | 3.606     | 0           | 63.9                            | 18.2     | 105       | 15.7   | 26.3     |      |
| 1,4-Dichlorobenzene        | 0.94             | 0.22           | 1.808     | 0           | 51.8                            | 18.1     | 112       | 13.4   | 27.4     |      |
| 2,4-Dinitrotoluene         | 0.97             | 0.54           | 1.808     | 0           | 53.6                            | 22       | 144       | 8.71   | 27.4     |      |
| N-Nitrosodi-n-propylamine  | 1.1              | 0.22           | 1.808     | 0           | 60.0                            | 58.6     | 101       | 11.1   | 22.6     |      |
| 4-Nitrophenol              | 2.1              | 0.27           | 3.606     | 0           | 59.4                            | 13.7     | 127       | 0.0856 | 20       |      |
| Pentachlorophenol          | 1.9              | 0.43           | 3.606     | 0           | 52.4                            | 16.5     | 107       | 0.320  | 27.1     |      |
| Phenol                     | 2.4              | 0.22           | 3.606     | 0           | 67.2                            | 12.5     | 114       | 16.9   | 32.2     |      |
| Pyrene                     | 1.2              | 0.22           | 1.808     | 0           | 65.9                            | 14.2     | 116       | 9.62   | 29.5     |      |
| 1,2,4-Trichlorobenzene     | 1.0              | 0.22           | 1.808     | 0           | 57.0                            | 16       | 125       | 10.9   | 27.8     |      |
| Surr: 2-Fluorophenol       | 2.0              |                | 3.606     |             | 54.2                            | 21       | 111       | 0      | 0        |      |
| Surr: Phenol-d5            | 2.3              |                | 3.606     |             | 63.2                            | 23.1     | 117       | 0      | 0        |      |
| Surr: 2,4,6-Tribromophenol | 2.2              |                | 3.606     |             | 59.6                            | 22.7     | 88.9      | 0      | 0        |      |
| Surr: Nitrobenzene-d5      | 1.2              |                | 1.808     |             | 65.4                            | 24.5     | 126       | 0      | 0        |      |
| Surr: 2-Fluorobiphenyl     | 1.2              |                | 1.808     |             | 63.8                            | 21.2     | 129       | 0      | 0        |      |
| Surr: 4-Terphenyl-d14      | 1.2              |                | 1.808     |             | 64.0                            | 39.4     | 107       | 0      | 0        |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | MB-15505  |       | SampType: MBLK           |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | PBS       |       | Batch ID: 15505          |             | RunNo: 21480                       |          |              |      |          |      |
| Prep Date: | 9/25/2014 |       | Analysis Date: 9/26/2014 |             | SeqNo: 628099                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercurv    | ND        | 0.033 |                          |             |                                    |          |              |      |          |      |

|            |           |       |           |                |           |          |           |                          |          |        |       |
|------------|-----------|-------|-----------|----------------|-----------|----------|-----------|--------------------------|----------|--------|-------|
| Sample ID  | LCS-15505 |       |           | SampType:      | LCS       |          | TestCode: | EPA Method 7471: Mercury |          |        |       |
| Client ID: | LCSS      |       |           | Batch ID:      | 15505     |          | RunNo:    | 21480                    |          |        |       |
| Prep Date: | 9/25/2014 |       |           | Analysis Date: | 9/26/2014 |          | SeqNo:    | 628100                   |          | Units: | mg/Kg |
| Analyte    | Result    | PQL   | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD                     | RPDLimit | Qual   |       |
| Mercury    | 0.17      | 0.033 | 0.1667    | 0              | 100       | 80       | 120       |                          |          |        |       |

|            |                |       |                |             |      |           |                          |      |                  |      |  |
|------------|----------------|-------|----------------|-------------|------|-----------|--------------------------|------|------------------|------|--|
| Sample ID  | 1409812-005BMS |       | SampType:      | MS          |      | TestCode: | EPA Method 7471: Mercury |      |                  |      |  |
| Client ID: | SWMU 14-3 4-6' |       | Batch ID:      | 15505       |      | RunNo:    | 21480                    |      |                  |      |  |
| Prep Date: | 9/25/2014      |       | Analysis Date: | 9/26/2014   |      | SeqNo:    | 628106                   |      | Units: mg/Kg-dry |      |  |
| Analyte    | Result         | PQL   | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                | %RPD | RPDLimit         | Qual |  |
| Mercury    | 0.19           | 0.036 | 0.1818         | 0           | 106  | 75        | 125                      |      |                  |      |  |

|            |                 |       |                |             |      |           |                          |      |                  |      |  |
|------------|-----------------|-------|----------------|-------------|------|-----------|--------------------------|------|------------------|------|--|
| Sample ID  | 1409812-005BMSD |       | SampType:      | MSD         |      | TestCode: | EPA Method 7471: Mercury |      |                  |      |  |
| Client ID: | SWMU 14-3 4-6'  |       | Batch ID:      | 15505       |      | RunNo:    | 21480                    |      |                  |      |  |
| Prep Date: | 9/25/2014       |       | Analysis Date: | 9/26/2014   |      | SeqNo:    | 628107                   |      | Units: mg/Kg-dry |      |  |
| Analyte    | Result          | PQL   | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                | %RPD | RPDLimit         | Qual |  |
| Mercury    | 0.19            | 0.036 | 0.1824         | 0           | 107  | 75        | 125                      | 1.20 | 20               |      |  |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>MB-15466</b>  |      | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>PBS</b>       |      | Batch ID:      | <b>15466</b>     |      | RunNo:    | <b>21420</b>                         |      |                     |      |
| Prep Date: | <b>9/23/2014</b> |      | Analysis Date: | <b>9/24/2014</b> |      | SeqNo:    | <b>625696</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Arsenic    | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Barium     | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Beryllium  | ND               | 0.15 |                |                  |      |           |                                      |      |                     |      |
| Cadmium    | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Chromium   | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Cobalt     | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Lead       | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Nickel     | ND               | 0.50 |                |                  |      |           |                                      |      |                     |      |
| Selenium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Silver     | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Vanadium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Zinc       | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>LCS-15466</b> |      | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>LCSS</b>      |      | Batch ID:      | <b>15466</b>     |      | RunNo:    | <b>21420</b>                         |      |                     |      |
| Prep Date: | <b>9/23/2014</b> |      | Analysis Date: | <b>9/24/2014</b> |      | SeqNo:    | <b>625697</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | 25               | 2.5  | 25.00          | 0                | 99.7 | 80        | 120                                  |      |                     |      |
| Arsenic    | 23               | 2.5  | 25.00          | 0                | 93.3 | 80        | 120                                  |      |                     |      |
| Barium     | 25               | 0.10 | 25.00          | 0                | 99.4 | 80        | 120                                  |      |                     |      |
| Beryllium  | 25               | 0.15 | 25.00          | 0                | 99.2 | 80        | 120                                  |      |                     |      |
| Cadmium    | 24               | 0.10 | 25.00          | 0                | 97.3 | 80        | 120                                  |      |                     |      |
| Chromium   | 24               | 0.30 | 25.00          | 0                | 97.6 | 80        | 120                                  |      |                     |      |
| Cobalt     | 24               | 0.30 | 25.00          | 0                | 97.8 | 80        | 120                                  |      |                     |      |
| Lead       | 24               | 0.25 | 25.00          | 0                | 97.3 | 80        | 120                                  |      |                     |      |
| Nickel     | 24               | 0.50 | 25.00          | 0                | 97.8 | 80        | 120                                  |      |                     |      |
| Selenium   | 24               | 2.5  | 25.00          | 0                | 94.1 | 80        | 120                                  |      |                     |      |
| Silver     | 5.0              | 0.25 | 5.000          | 0                | 101  | 80        | 120                                  |      |                     |      |
| Vanadium   | 25               | 2.5  | 25.00          | 0                | 101  | 80        | 120                                  |      |                     |      |
| Zinc       | 23               | 2.5  | 25.00          | 0                | 91.5 | 80        | 120                                  |      |                     |      |

|            |                         |      |                |                  |      |           |                                      |      |                         |      |
|------------|-------------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|-------------------------|------|
| Sample ID  | <b>1409812-006BMS</b>   |      | SampType:      | <b>MS</b>        |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                         |      |
| Client ID: | <b>SWMU 14-3 14-16'</b> |      | Batch ID:      | <b>15466</b>     |      | RunNo:    | <b>21466</b>                         |      |                         |      |
| Prep Date: | <b>9/23/2014</b>        |      | Analysis Date: | <b>9/25/2014</b> |      | SeqNo:    | <b>627436</b>                        |      | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                  | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit                | Qual |
| Arsenic    | 23                      | 2.6  | 25.68          | 1.390            | 84.5 | 75        | 125                                  |      |                         |      |
| Beryllium  | 23                      | 0.15 | 25.68          | 0.1248           | 88.0 | 75        | 125                                  |      |                         |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID  | <b>1409812-006BMS</b>   |      | SampType:      | <b>MS</b>        |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                         |      |
|------------|-------------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|-------------------------|------|
| Client ID: | <b>SWMU 14-3 14-16'</b> |      | Batch ID:      | <b>15466</b>     |      | RunNo:    | <b>21466</b>                         |      |                         |      |
| Prep Date: | <b>9/23/2014</b>        |      | Analysis Date: | <b>9/25/2014</b> |      | SeqNo:    | <b>627436</b>                        |      | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                  | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit                | Qual |
| Cadmium    | 22                      | 0.10 | 25.68          | 0.04160          | 84.4 | 75        | 125                                  |      |                         |      |
| Chromium   | 23                      | 0.31 | 25.68          | 1.606            | 84.8 | 75        | 125                                  |      |                         |      |
| Cobalt     | 24                      | 0.31 | 25.68          | 3.188            | 80.9 | 75        | 125                                  |      |                         |      |
| Lead       | 24                      | 0.26 | 25.68          | 2.773            | 80.7 | 75        | 125                                  |      |                         |      |
| Nickel     | 23                      | 0.51 | 25.68          | 2.010            | 81.7 | 75        | 125                                  |      |                         |      |
| Selenium   | 20                      | 2.6  | 25.68          | 0                | 78.1 | 75        | 125                                  |      |                         |      |
| Silver     | 4.3                     | 0.26 | 5.137          | 0                | 84.6 | 75        | 125                                  |      |                         |      |
| Vanadium   | 42                      | 2.6  | 25.68          | 20.33            | 85.3 | 75        | 125                                  |      |                         |      |
| Zinc       | 35                      | 2.6  | 25.68          | 15.86            | 75.9 | 75        | 125                                  |      |                         |      |

| Sample ID  | <b>1409812-006BMSD</b>  |      | SampType:      | <b>MSD</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |       |                         |      |
|------------|-------------------------|------|----------------|------------------|------|-----------|--------------------------------------|-------|-------------------------|------|
| Client ID: | <b>SWMU 14-3 14-16'</b> |      | Batch ID:      | <b>15466</b>     |      | RunNo:    | <b>21466</b>                         |       |                         |      |
| Prep Date: | <b>9/23/2014</b>        |      | Analysis Date: | <b>9/25/2014</b> |      | SeqNo:    | <b>627437</b>                        |       | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                  | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD  | RPDLimit                | Qual |
| Arsenic    | 23                      | 2.5  | 25.43          | 1.390            | 83.9 | 75        | 125                                  | 1.67  | 20                      |      |
| Beryllium  | 23                      | 0.15 | 25.43          | 0.1248           | 88.5 | 75        | 125                                  | 0.444 | 20                      |      |
| Cadmium    | 22                      | 0.10 | 25.43          | 0.04160          | 84.8 | 75        | 125                                  | 0.530 | 20                      |      |
| Chromium   | 24                      | 0.31 | 25.43          | 1.606            | 86.8 | 75        | 125                                  | 1.31  | 20                      |      |
| Cobalt     | 24                      | 0.31 | 25.43          | 3.188            | 80.5 | 75        | 125                                  | 1.35  | 20                      |      |
| Lead       | 24                      | 0.25 | 25.43          | 2.773            | 81.7 | 75        | 125                                  | 0.169 | 20                      |      |
| Nickel     | 23                      | 0.51 | 25.43          | 2.010            | 81.4 | 75        | 125                                  | 1.18  | 20                      |      |
| Selenium   | 20                      | 2.5  | 25.43          | 0                | 78.2 | 75        | 125                                  | 0.924 | 20                      |      |
| Silver     | 4.3                     | 0.25 | 5.087          | 0                | 84.8 | 75        | 125                                  | 0.808 | 20                      |      |
| Vanadium   | 41                      | 2.5  | 25.43          | 20.33            | 82.8 | 75        | 125                                  | 1.99  | 20                      |      |
| Zinc       | 36                      | 2.5  | 25.43          | 15.86            | 78.4 | 75        | 125                                  | 1.19  | 20                      |      |

| Sample ID  | <b>1409812-006BMS</b>   |      | SampType:      | <b>MS</b>        |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                         |      |
|------------|-------------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|-------------------------|------|
| Client ID: | <b>SWMU 14-3 14-16'</b> |      | Batch ID:      | <b>15466</b>     |      | RunNo:    | <b>21515</b>                         |      |                         |      |
| Prep Date: | <b>9/23/2014</b>        |      | Analysis Date: | <b>9/29/2014</b> |      | SeqNo:    | <b>630114</b>                        |      | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                  | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit                | Qual |
| Antimony   | 12                      | 2.6  | 25.68          | 0                | 45.6 | 75        | 125                                  |      |                         | S    |
| Barium     | 170                     | 0.10 | 25.68          | 198.8            | -128 | 75        | 125                                  |      |                         | S    |

| Sample ID  | <b>1409812-006BMSD</b>  |     | SampType:      | <b>MSD</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                         |      |
|------------|-------------------------|-----|----------------|------------------|------|-----------|--------------------------------------|------|-------------------------|------|
| Client ID: | <b>SWMU 14-3 14-16'</b> |     | Batch ID:      | <b>15466</b>     |      | RunNo:    | <b>21515</b>                         |      |                         |      |
| Prep Date: | <b>9/23/2014</b>        |     | Analysis Date: | <b>9/29/2014</b> |      | SeqNo:    | <b>630115</b>                        |      | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                  | PQL | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit                | Qual |

### Qualifiers:

- |                                                   |                                                      |
|---------------------------------------------------|------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |                                                      |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409812

17-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |                  |                |           |             |                               |          |           |       |          |      |
|------------|------------------|----------------|-----------|-------------|-------------------------------|----------|-----------|-------|----------|------|
| Sample ID  | 1409812-006BMSD  | SampType:      | MSD       | TestCode:   | EPA Method 6010B: Soil Metals |          |           |       |          |      |
| Client ID: | SWMU 14-3 14-16' | Batch ID:      | 15466     | RunNo:      | 21515                         |          |           |       |          |      |
| Prep Date: | 9/23/2014        | Analysis Date: | 9/29/2014 | SeqNo:      | 630115                        | Units:   | mg/Kg-dry |       |          |      |
| Analyte    | Result           | PQL            | SPK value | SPK Ref Val | %REC                          | LowLimit | HighLimit | %RPD  | RPDLimit | Qual |
| Antimony   | 12               | 2.5            | 25.43     | 0           | 46.3                          | 75       | 125       | 0.529 | 20       | S    |
| Barium     | 190              | 0.10           | 25.43     | 198.8       | -26.7                         | 75       | 125       | 14.5  | 20       | S    |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409812

RcptNo: 1

Received by/date: LM 09/17/14

Logged By: Anne Thorne 9/17/2014 7:15:00 AM



Completed By: Anne Thorne 9/17/2014



Reviewed By: IO 09/17/14

## Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

## Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH: \_\_\_\_\_  
(<2 or >12 unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

|                      |       |       |                                                                                                                               |
|----------------------|-------|-------|-------------------------------------------------------------------------------------------------------------------------------|
| Person Notified:     | _____ | Date: | _____                                                                                                                         |
| By Whom:             | _____ | Via:  | <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person |
| Regarding:           | _____ |       |                                                                                                                               |
| Client Instructions: | _____ |       |                                                                                                                               |

17. Additional remarks:

## 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.9     | Good      | Yes         |         |           |           |



|       |        |       |
|-------|--------|-------|
| Black | White  | White |
| White | Shaded | White |
| White | White  | Black |

[www.hallenvironmental.com](http://www.hallenvironmental.com)

Tel. 505-345-3975 Fax 505-345-4107

[illegible]

KELLY ROBINSON

On Ice: ☒ Yes ☐ No

# sample temperature:

Date \_\_\_\_\_ Time \_\_\_\_\_

1

पृष्ठ सं. ६११

[illegible]

154

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|   |   |
|---|---|
| 3 | 1 |
| 2 | 1 |


$$\frac{105}{16.7}$$

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|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

...

|       |       |
|-------|-------|
| Date: | Time: |
|-------|-------|

1824

(C) 2006 Pearson Education, Inc.

Christine Walker 9/16/14 12:15

09/17/4075

→



| Analyte         | Analytical Method             |
|-----------------|-------------------------------|
| Antimony        | SW-846 method 6010/6020       |
| Arsenic         | SW-846 method 6010/6020       |
| Barium          | SW-846 method 6010/6020       |
| Beryllium       | SW-846 method 6010/6020       |
| Cadmium         | SW-846 method 6010/6020       |
| Chromium        | SW-846 method 6010/6020       |
| Chromium VI     | SW-846 Method 3060A           |
| Cobalt          | SW-846 method 6010/6020       |
| Cyanide         | SW-846 method 335.4/335.2 mod |
| Lead            | SW-846 method 6010/6020       |
| Tetraethyl lead | SW-846 method 8270C           |
| Mercury         | SW-846 method 7470/7471       |
| Nickel          | SW-846 method 6010/6020       |
| Selenium        | SW-846 method 6010/6020       |
| Silver          | SW-846 method 6010/6020       |
| Vanadium        | SW-846 method 6010/6020       |
| Zinc            | SW-846 method 6010/6020       |

In addition, groundwater samples will also be analyzed for the following general chemistry parameters.

| Analyte                | Analytical Method                     |
|------------------------|---------------------------------------|
| Total Dissolved Solids | SM-2540C                              |
| Bicarbonate            | SM-2320B                              |
| Chloride               | EPA method 300.0                      |
| Sulfate                | EPA method 300.0                      |
| Calcium                | EPA method 6010/6020                  |
| Magnesium              | EPA method 6010/6020                  |
| Sodium                 | EPA method 6010/6020                  |
| Potassium              | EPA method 6010/6020                  |
| Manganese              | SW-846 method 6010/6020               |
| Nitrate/nitrite        | EPA method 300.0                      |
| Ferric/ferrous Iron    | SW-846 method 6010/6020 & SM 3500Fe2+ |

As discussed in section 5.3.3, field measurements will be obtained for pH, specific conductance, dissolved oxygen concentrations, oxidation-reduction potential, and temperature.



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 16, 2014

Kelly Robinson

Western Refining Southwest, Inc.  
#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409955

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 12 sample(s) on 9/19/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

## Case Narrative

WO#: 1409955  
Date: 10/16/2014

---

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

---

Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:00:00 AM

**Lab ID:** 1409955-001

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 9/25/2014 5:20:16 AM  | 15397                |
| Motor Oil Range Organics (MRO)                 | ND     | 54       |      | mg/Kg-dry | 1  | 9/25/2014 5:20:16 AM  | 15397                |
| Surr: DNOP                                     | 93.5   | 57.9-140 |      | %REC      | 1  | 9/25/2014 5:20:16 AM  | 15397                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.3      |      | mg/Kg-dry | 1  | 9/24/2014 1:55:18 AM  | R21374               |
| Surr: BFB                                      | 88.6   | 80-120   |      | %REC      | 1  | 9/24/2014 1:55:18 AM  | R21374               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 7.5    | 1.0      |      | wt%       | 1  | 9/19/2014 2:30:00 PM  | R21333               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.035    |      | mg/Kg-dry | 1  | 9/26/2014 11:18:18 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Arsenic                                        | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Barium                                         | 97     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Beryllium                                      | 0.36   | 0.16     |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Chromium                                       | 5.0    | 0.32     |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Cobalt                                         | 3.1    | 0.32     |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Lead                                           | 3.4    | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Nickel                                         | 5.0    | 0.53     |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Vanadium                                       | 16     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:11:18 PM  | 15558                |
| Zinc                                           | 20     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 12:19:55 PM | 15558                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |
| Benzoic acid                                   | ND     | 0.54     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM  | 15394                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:00:00 AM

**Lab ID:** 1409955-001

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 4-Chloro-3-methylphenol                | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 4-Chloroaniline                        | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 2-Chloronaphthalene                    | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Di-n-butyl phthalate                   | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Di-n-octyl phthalate                   | ND     | 0.43 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 2,4-Dichlorophenol                     | ND     | 0.43 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 2,4-Dimethylphenol                     | ND     | 0.33 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 2,4-Dinitrophenol                      | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 2,4-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 2,6-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| Isophorone                             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 3 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:00:00 AM

**Lab ID:** 1409955-001

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch                |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|----------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: <b>DAM</b>  |
| 2-Methylphenol                         | ND     | 0.54      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| 3+4-Methylphenol                       | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| N-Nitrosodi-n-propylamine              | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| N-Nitrosodiphenylamine                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Naphthalene                            | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| 2-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| 3-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| 4-Nitroaniline                         | ND     | 0.43      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Nitrobenzene                           | ND     | 0.54      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| 2-Nitrophenol                          | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| 4-Nitrophenol                          | ND     | 0.27      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Pentachlorophenol                      | ND     | 0.43      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Phenanthrene                           | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Phenol                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Pyrene                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Pyridine                               | ND     | 0.54      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| 1,2,4-Trichlorobenzene                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| 2,4,5-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| 2,4,6-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Surr: 2-Fluorophenol                   | 54.6   | 21-111    |      | %REC      | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Surr: Phenol-d5                        | 54.4   | 23.1-117  |      | %REC      | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Surr: 2,4,6-Tribromophenol             | 45.5   | 22.7-88.9 |      | %REC      | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Surr: Nitrobenzene-d5                  | 61.9   | 24.5-126  |      | %REC      | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Surr: 2-Fluorobiphenyl                 | 57.0   | 21.2-129  |      | %REC      | 1  | 9/22/2014 4:21:30 PM | 15394                |
| Surr: 4-Terphenyl-d14                  | 65.6   | 39.4-107  |      | %REC      | 1  | 9/22/2014 4:21:30 PM | 15394                |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      |           |    |                      | Analyst: <b>cadg</b> |
| Benzene                                | ND     | 0.00135   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| Toluene                                | ND     | 0.00135   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| Ethylbenzene                           | ND     | 0.00135   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| Xylenes, Total                         | ND     | 0.00135   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00135   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00135   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00135   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00135   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00135   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| Naphthalene                            | ND     | 0.00135   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| 1-Methylnaphthalene                    | ND     | 0.00270   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| 2-Methylnaphthalene                    | ND     | 0.00270   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |
| Acetone                                | 0.0289 | 0.00676   |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 4 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:00:00 AM

**Lab ID:** 1409955-001

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Bromodichloromethane                   | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Bromoform                              | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Bromomethane                           | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 2-Butanone                             | ND     | 0.00676 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Carbon tetrachloride                   | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Chlorobenzene                          | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Chloroethane                           | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Chloroform                             | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Chloromethane                          | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 2-Chlorotoluene                        | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Carbon disulfide                       | ND     | 0.00676 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 4-Chlorotoluene                        | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| cis-1,2-DCE                            | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| cis-1,3-Dichloropropene                | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Dibromochloromethane                   | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Dibromomethane                         | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,2-Dichlorobenzene                    | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,3-Dichlorobenzene                    | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,4-Dichlorobenzene                    | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Dichlorodifluoromethane                | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,1-Dichloroethane                     | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,1-Dichloroethene                     | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,2-Dichloropropane                    | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,3-Dichloropropane                    | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 2,2-Dichloropropane                    | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,1-Dichloropropene                    | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Hexachlorobutadiene                    | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Isopropylbenzene                       | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 4-Isopropyltoluene                     | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Methylene chloride                     | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| n-Butylbenzene                         | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 2-Hexanone                             | ND     | 0.00676 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| n-Propylbenzene                        | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| sec-Butylbenzene                       | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Styrene                                | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 4-Methyl-2-pentanone                   | ND     | 0.00676 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| tert-Butylbenzene                      | ND     | 0.00135 |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |              |
|--------------------|---------------------------------------------------|------------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    | Page 5 of 82 |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |              |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |              |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |              |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |              |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:00:00 AM

**Lab ID:** 1409955-001

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Tetrachloroethene (PCE)                | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| trans-1,2-DCE                          | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| trans-1,3-Dichloropropene              | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,1,1-Trichloroethane                  | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,1,2-Trichloroethane                  | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Trichloroethene (TCE)                  | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Trichlorofluoromethane                 | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| 1,2,3-Trichloropropane                 | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Vinyl chloride                         | ND     | 0.00135  |      | mg/Kg-dry | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Surr: 1,2-Dichloroethane-d4            | 121    | 70-130   |      | %REC      | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Surr: 4-Bromofluorobenzene             | 95.6   | 65.3-135 |      | %REC      | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Surr: Dibromofluoromethane             | 104    | 70-130   |      | %REC      | 1  | 9/19/2014 9:03:37 PM | 15407         |
| Surr: Toluene-d8                       | 98.6   | 70-130   |      | %REC      | 1  | 9/19/2014 9:03:37 PM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409955**

Date Reported: **10/16/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (0.5-2.0')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:15:00 AM

**Lab ID:** 1409955-002

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 9/22/2014 11:51:09 AM | 15397                |
| Motor Oil Range Organics (MRO)                 | ND     | 56       |      | mg/Kg-dry | 1  | 9/22/2014 11:51:09 AM | 15397                |
| Surr: DNOP                                     | 108    | 57.9-140 |      | %REC      | 1  | 9/22/2014 11:51:09 AM | 15397                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.3      |      | mg/Kg-dry | 1  | 9/24/2014 2:25:23 AM  | R21374               |
| Surr: BFB                                      | 77.4   | 80-120   | S    | %REC      | 1  | 9/24/2014 2:25:23 AM  | R21374               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 10     | 1.0      |      | wt%       | 1  | 9/19/2014 2:30:00 PM  | R21333               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.035    |      | mg/Kg-dry | 1  | 9/26/2014 11:20:09 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Arsenic                                        | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Barium                                         | 100    | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Beryllium                                      | 0.41   | 0.17     |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Chromium                                       | 5.3    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Cobalt                                         | 3.5    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Lead                                           | 4.0    | 0.28     |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Nickel                                         | 5.7    | 0.56     |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Vanadium                                       | 18     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:12:40 PM  | 15558                |
| Zinc                                           | 23     | 2.8      |      | mg/Kg-dry | 1  | 10/2/2014 12:21:12 PM | 15558                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |
| Benzoic acid                                   | ND     | 0.56     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM  | 15394                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (0.5-2.0')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:15:00 AM

**Lab ID:** 1409955-002

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 4-Chloro-3-methylphenol                | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 4-Chloroaniline                        | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 2-Chloronaphthalene                    | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Di-n-butyl phthalate                   | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Di-n-octyl phthalate                   | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 2,4-Dichlorophenol                     | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 2,4-Dimethylphenol                     | ND     | 0.33 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 2,4-Dinitrophenol                      | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 2,4-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 2,6-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| Isophorone                             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 4:50:40 PM | 15394               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 8 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-5 (0.5-2.0')

Project: GROUP 9

Collection Date: 9/17/2014 10:15:00 AM

Lab ID: 1409955-002

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units                | DF | Date Analyzed         | Batch |
|----------------------------------------|--------|-----------|------|----------------------|----|-----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: <b>DAM</b>  |    |                       |       |
| 2-Methylphenol                         | ND     | 0.56      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| 3+4-Methylphenol                       | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| N-Nitrosodi-n-propylamine              | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| N-Nitrosodiphenylamine                 | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Naphthalene                            | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| 2-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| 3-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| 4-Nitroaniline                         | ND     | 0.44      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Nitrobenzene                           | ND     | 0.56      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| 2-Nitrophenol                          | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| 4-Nitrophenol                          | ND     | 0.28      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Pentachlorophenol                      | ND     | 0.44      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Phenanthrene                           | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Phenol                                 | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Pyrene                                 | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Pyridine                               | ND     | 0.56      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| 2,4,5-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| 2,4,6-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Surr: 2-Fluorophenol                   | 66.0   | 21-111    |      | %REC                 | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Surr: Phenol-d5                        | 69.0   | 23.1-117  |      | %REC                 | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Surr: 2,4,6-Tribromophenol             | 51.7   | 22.7-88.9 |      | %REC                 | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Surr: Nitrobenzene-d5                  | 70.8   | 24.5-126  |      | %REC                 | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Surr: 2-Fluorobiphenyl                 | 66.9   | 21.2-129  |      | %REC                 | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| Surr: 4-Terphenyl-d14                  | 73.4   | 39.4-107  |      | %REC                 | 1  | 9/22/2014 4:50:40 PM  | 15394 |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      | Analyst: <b>cadg</b> |    |                       |       |
| Benzene                                | ND     | 0.00131   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| Toluene                                | ND     | 0.00131   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| Ethylbenzene                           | ND     | 0.00131   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| Xylenes, Total                         | ND     | 0.00131   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00131   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00131   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00131   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00131   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00131   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| Naphthalene                            | ND     | 0.00131   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| 1-Methylnaphthalene                    | ND     | 0.00261   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| 2-Methylnaphthalene                    | ND     | 0.00261   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |
| Acetone                                | 0.0333 | 0.00653   |      | mg/Kg-dry            | 1  | 9/19/2014 11:55:52 PM | 15407 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 9 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (0.5-2.0')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:15:00 AM

**Lab ID:** 1409955-002

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|-----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                       | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Bromodichloromethane                   | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Bromoform                              | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Bromomethane                           | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 2-Butanone                             | 0.0135 | 0.00653 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Carbon tetrachloride                   | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Chlorobenzene                          | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Chloroethane                           | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Chloroform                             | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Chloromethane                          | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 2-Chlorotoluene                        | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Carbon disulfide                       | ND     | 0.00653 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 4-Chlorotoluene                        | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| cis-1,2-DCE                            | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| cis-1,3-Dichloropropene                | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Dibromochloromethane                   | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Dibromomethane                         | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,2-Dichlorobenzene                    | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,3-Dichlorobenzene                    | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,4-Dichlorobenzene                    | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Dichlorodifluoromethane                | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,1-Dichloroethane                     | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,1-Dichloroethene                     | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,2-Dichloropropane                    | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,3-Dichloropropane                    | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 2,2-Dichloropropane                    | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,1-Dichloropropene                    | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Hexachlorobutadiene                    | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Isopropylbenzene                       | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 4-Isopropyltoluene                     | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Methylene chloride                     | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| n-Butylbenzene                         | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 2-Hexanone                             | ND     | 0.00653 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| n-Propylbenzene                        | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| sec-Butylbenzene                       | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Styrene                                | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 4-Methyl-2-pentanone                   | ND     | 0.00653 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| tert-Butylbenzene                      | ND     | 0.00131 |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (0.5-2.0')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:15:00 AM

**Lab ID:** 1409955-002

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|-----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                       | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Tetrachloroethene (PCE)                | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| trans-1,2-DCE                          | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| trans-1,3-Dichloropropene              | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,1,1-Trichloroethane                  | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,1,2-Trichloroethane                  | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Trichloroethene (TCE)                  | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Trichlorofluoromethane                 | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| 1,2,3-Trichloropropane                 | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Vinyl chloride                         | ND     | 0.00131  |      | mg/Kg-dry | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Surr: 1,2-Dichloroethane-d4            | 115    | 70-130   |      | %REC      | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Surr: 4-Bromofluorobenzene             | 102    | 65.3-135 |      | %REC      | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Surr: Dibromofluoromethane             | 98.7   | 70-130   |      | %REC      | 1  | 9/19/2014 11:55:52 PM | 15407         |
| Surr: Toluene-d8                       | 96.1   | 70-130   |      | %REC      | 1  | 9/19/2014 11:55:52 PM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 11 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (16-18')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:25:00 AM

**Lab ID:** 1409955-003

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 2800   | 110      |      | mg/Kg-dry | 10 | 9/25/2014 5:49:47 AM  | 15397                |
| Motor Oil Range Organics (MRO)                 | 1700   | 570      |      | mg/Kg-dry | 10 | 9/25/2014 5:49:47 AM  | 15397                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/25/2014 5:49:47 AM  | 15397                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 70     | 32       |      | mg/Kg-dry | 10 | 9/24/2014 2:55:33 AM  | R21374               |
| Surr: BFB                                      | 114    | 80-120   |      | %REC      | 10 | 9/24/2014 2:55:33 AM  | R21374               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 11     | 1.0      |      | wt%       | 1  | 9/19/2014 2:30:00 PM  | R21333               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.035    |      | mg/Kg-dry | 1  | 9/26/2014 11:22:00 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Arsenic                                        | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Barium                                         | 130    | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Beryllium                                      | 0.43   | 0.17     |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Chromium                                       | 21     | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Cobalt                                         | 3.8    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Lead                                           | 5.0    | 0.28     |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Nickel                                         | 5.8    | 0.56     |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Vanadium                                       | 20     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:13:53 PM  | 15558                |
| Zinc                                           | 38     | 2.8      |      | mg/Kg-dry | 1  | 10/2/2014 12:22:26 PM | 15558                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |
| Acenaphthylene                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |
| Aniline                                        | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |
| Anthracene                                     | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |
| Azobenzene                                     | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |
| Benz(a)anthracene                              | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |
| Benzo(a)pyrene                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |
| Benzo(b)fluoranthene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |
| Benzo(g,h,i)perylene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |
| Benzo(k)fluoranthene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |
| Benzyl alcohol                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM  | 15394                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (16-18')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:25:00 AM

**Lab ID:** 1409955-003

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Bis(2-chloroethyl)ether                | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 4-Bromophenyl phenyl ether             | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Butyl benzyl phthalate                 | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Carbazole                              | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2-Chloronaphthalene                    | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2-Chlorophenol                         | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Chrysene                               | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Di-n-octyl phthalate                   | ND     | 0.89 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Dibenz(a,h)anthracene                  | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Dibenzofuran                           | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 1,2-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 1,3-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 1,4-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Diethyl phthalate                      | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Dimethyl phthalate                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2,4-Dichlorophenol                     | ND     | 0.89 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2,4-Dimethylphenol                     | ND     | 0.67 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Fluoranthene                           | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Fluorene                               | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Hexachlorobenzene                      | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Hexachlorobutadiene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Hexachlorocyclopentadiene              | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Hexachloroethane                       | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 1-Methylnaphthalene                    | 1.2    | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2-Methylnaphthalene                    | 1.9    | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (16-18')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:25:00 AM

**Lab ID:** 1409955-003

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: <b>DAM</b> |
| 2-Methylphenol                         | ND     | 1.1       |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 3+4-Methylphenol                       | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| N-Nitrosodi-n-propylamine              | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| N-Nitrosodiphenylamine                 | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Naphthalene                            | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 3-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 4-Nitroaniline                         | ND     | 0.89      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Nitrobenzene                           | ND     | 1.1       |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2-Nitrophenol                          | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 4-Nitrophenol                          | ND     | 0.56      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Pentachlorophenol                      | ND     | 0.89      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Phenanthrene                           | 0.50   | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Phenol                                 | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Pyrene                                 | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Pyridine                               | ND     | 1.1       |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 1,2,4-Trichlorobenzene                 | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2,4,5-Trichlorophenol                  | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| 2,4,6-Trichlorophenol                  | ND     | 0.45      |      | mg/Kg-dry | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Surr: 2-Fluorophenol                   | 61.8   | 21-111    |      | %REC      | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Surr: Phenol-d5                        | 60.8   | 23.1-117  |      | %REC      | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Surr: 2,4,6-Tribromophenol             | 22.0   | 22.7-88.9 | S    | %REC      | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Surr: Nitrobenzene-d5                  | 73.2   | 24.5-126  |      | %REC      | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Surr: 2-Fluorobiphenyl                 | 66.3   | 21.2-129  |      | %REC      | 1  | 9/22/2014 7:44:59 PM | 15394               |
| Surr: 4-Terphenyl-d14                  | 64.3   | 39.4-107  |      | %REC      | 1  | 9/22/2014 7:44:59 PM | 15394               |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: <b>RAA</b> |
| Benzene                                | 1.8    | 0.16      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Toluene                                | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Ethylbenzene                           | 3.2    | 0.16      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,2,4-Trimethylbenzene                 | 2.2    | 0.16      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,3,5-Trimethylbenzene                 | 1.3    | 0.16      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,2-Dichloroethane (EDC)               | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,2-Dibromoethane (EDB)                | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Naphthalene                            | 0.48   | 0.32      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1-Methylnaphthalene                    | 1.3    | 0.65      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 2-Methylnaphthalene                    | 2.4    | 0.65      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Acetone                                | ND     | 2.4       |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Bromobenzene                           | ND     | 0.16      |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (16-18')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:25:00 AM

**Lab ID:** 1409955-003

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: <b>RAA</b> |
| Bromodichloromethane               | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Bromoform                          | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Bromomethane                       | ND     | 0.49 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 2-Butanone                         | ND     | 1.6  |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Carbon disulfide                   | ND     | 1.6  |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Carbon tetrachloride               | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Chlorobenzene                      | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Chloroethane                       | ND     | 0.32 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Chloroform                         | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Chloromethane                      | ND     | 0.49 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 2-Chlorotoluene                    | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 4-Chlorotoluene                    | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| cis-1,2-DCE                        | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| cis-1,3-Dichloropropene            | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.32 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Dibromochloromethane               | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Dibromomethane                     | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,2-Dichlorobenzene                | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,3-Dichlorobenzene                | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,4-Dichlorobenzene                | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Dichlorodifluoromethane            | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,1-Dichloroethane                 | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,1-Dichloroethene                 | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,2-Dichloropropane                | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,3-Dichloropropane                | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 2,2-Dichloropropane                | ND     | 0.32 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,1-Dichloropropene                | ND     | 0.32 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Hexachlorobutadiene                | ND     | 0.32 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 2-Hexanone                         | ND     | 1.6  |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Isopropylbenzene                   | 0.28   | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 4-Isopropyltoluene                 | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 4-Methyl-2-pentanone               | ND     | 1.6  |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Methylene chloride                 | ND     | 0.49 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| n-Butylbenzene                     | ND     | 0.49 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| n-Propylbenzene                    | 0.46   | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| sec-Butylbenzene                   | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| Styrene                            | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| tert-Butylbenzene                  | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.16 |      | mg/Kg-dry | 5  | 9/19/2014 7:08:51 PM | R21325              |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (16-18')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:25:00 AM

**Lab ID:** 1409955-003

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch  |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |        |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| Tetrachloroethene (PCE)            | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| trans-1,2-DCE                      | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| trans-1,3-Dichloropropene          | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| 1,2,3-Trichlorobenzene             | ND     | 0.32   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| 1,2,4-Trichlorobenzene             | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| 1,1,1-Trichloroethane              | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| 1,1,2-Trichloroethane              | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| Trichloroethene (TCE)              | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| Trichlorofluoromethane             | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| 1,2,3-Trichloropropane             | ND     | 0.32   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| Vinyl chloride                     | ND     | 0.16   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| Xylenes, Total                     | 4.8    | 0.32   |      | mg/Kg-dry           | 5  | 9/19/2014 7:08:51 PM | R21325 |
| Surr: Dibromofluoromethane         | 86.5   | 70-130 |      | %REC                | 5  | 9/19/2014 7:08:51 PM | R21325 |
| Surr: 1,2-Dichloroethane-d4        | 85.4   | 70-130 |      | %REC                | 5  | 9/19/2014 7:08:51 PM | R21325 |
| Surr: Toluene-d8                   | 92.7   | 70-130 |      | %REC                | 5  | 9/19/2014 7:08:51 PM | R21325 |
| Surr: 4-Bromofluorobenzene         | 92.8   | 70-130 |      | %REC                | 5  | 9/19/2014 7:08:51 PM | R21325 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 16 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:30:00 AM

**Lab ID:** 1409955-004

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF  | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|-----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |     |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 6200   | 110      |      | mg/Kg-dry | 10  | 9/25/2014 6:48:46 AM  | 15397                |
| Motor Oil Range Organics (MRO)                 | 1500   | 550      |      | mg/Kg-dry | 10  | 9/25/2014 6:48:46 AM  | 15397                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10  | 9/25/2014 6:48:46 AM  | 15397                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |     |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 3700   | 300      |      | mg/Kg-dry | 100 | 9/24/2014 3:55:45 AM  | R21374               |
| Surr: BFB                                      | 200    | 80-120   | S    | %REC      | 100 | 9/24/2014 3:55:45 AM  | R21374               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |     |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 7.8    | 1.0      |      | wt%       | 1   | 9/19/2014 2:30:00 PM  | R21333               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |     |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1   | 9/26/2014 11:23:53 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |     |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Arsenic                                        | ND     | 2.7      |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Barium                                         | 150    | 0.11     |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Beryllium                                      | ND     | 0.16     |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Chromium                                       | 8.0    | 0.32     |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Cobalt                                         | 3.4    | 0.32     |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Lead                                           | 4.6    | 0.27     |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Nickel                                         | 2.3    | 0.53     |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Vanadium                                       | 15     | 2.7      |      | mg/Kg-dry | 1   | 10/1/2014 1:15:08 PM  | 15558                |
| Zinc                                           | 15     | 2.7      |      | mg/Kg-dry | 1   | 10/2/2014 12:23:43 PM | 15558                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |     |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 2.1      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |
| Acenaphthylene                                 | ND     | 2.1      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |
| Aniline                                        | ND     | 2.1      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |
| Anthracene                                     | ND     | 2.1      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |
| Azobenzene                                     | ND     | 2.1      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |
| Benz(a)anthracene                              | ND     | 2.1      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |
| Benzo(a)pyrene                                 | ND     | 2.1      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |
| Benzo(b)fluoranthene                           | ND     | 2.1      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |
| Benzo(g,h,i)perylene                           | ND     | 2.1      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |
| Benzo(k)fluoranthene                           | ND     | 2.1      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |
| Benzoic acid                                   | ND     | 5.3      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |
| Benzyl alcohol                                 | ND     | 2.1      |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM  | 15394                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:30:00 AM

**Lab ID:** 1409955-004

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|-----|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                      | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Bis(2-chloroethyl)ether                | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Bis(2-chloroisopropyl)ether            | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.3 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 4-Bromophenyl phenyl ether             | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Butyl benzyl phthalate                 | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Carbazole                              | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 4-Chloro-3-methylphenol                | ND     | 5.3 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 4-Chloroaniline                        | ND     | 5.3 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 2-Chloronaphthalene                    | ND     | 2.7 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 2-Chlorophenol                         | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 4-Chlorophenyl phenyl ether            | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Chrysene                               | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Di-n-butyl phthalate                   | ND     | 5.3 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Di-n-octyl phthalate                   | ND     | 4.2 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Dibenz(a,h)anthracene                  | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Dibenzofuran                           | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 1,2-Dichlorobenzene                    | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 1,3-Dichlorobenzene                    | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 1,4-Dichlorobenzene                    | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 3,3'-Dichlorobenzidine                 | ND     | 2.7 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Diethyl phthalate                      | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Dimethyl phthalate                     | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 2,4-Dichlorophenol                     | ND     | 4.2 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 2,4-Dimethylphenol                     | ND     | 3.2 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.3 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 2,4-Dinitrophenol                      | ND     | 5.3 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 2,4-Dinitrotoluene                     | ND     | 5.3 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 2,6-Dinitrotoluene                     | ND     | 5.3 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Fluoranthene                           | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Fluorene                               | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Hexachlorobenzene                      | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Hexachlorobutadiene                    | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Hexachlorocyclopentadiene              | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Hexachloroethane                       | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| Isophorone                             | ND     | 5.3 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 1-Methylnaphthalene                    | 7.1    | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |
| 2-Methylnaphthalene                    | 14     | 2.1 |      | mg/Kg-dry | 10 | 9/23/2014 6:17:15 PM | 15394               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:30:00 AM

**Lab ID:** 1409955-004

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF  | Date Analyzed        | Batch               |
|----------------------------------------|--------|-----------|------|-----------|-----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |     |                      | Analyst: <b>DAM</b> |
| 2-Methylphenol                         | ND     | 5.3       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| 3+4-Methylphenol                       | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| N-Nitrosodi-n-propylamine              | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| N-Nitrosodiphenylamine                 | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Naphthalene                            | 6.0    | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| 2-Nitroaniline                         | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| 3-Nitroaniline                         | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| 4-Nitroaniline                         | ND     | 4.2       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Nitrobenzene                           | ND     | 5.3       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| 2-Nitrophenol                          | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| 4-Nitrophenol                          | ND     | 2.7       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Pentachlorophenol                      | ND     | 4.2       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Phenanthrene                           | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Phenol                                 | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Pyrene                                 | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Pyridine                               | ND     | 5.3       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| 1,2,4-Trichlorobenzene                 | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| 2,4,5-Trichlorophenol                  | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| 2,4,6-Trichlorophenol                  | ND     | 2.1       |      | mg/Kg-dry | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Surr: 2-Fluorophenol                   | 0      | 21-111    | S    | %REC      | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Surr: Phenol-d5                        | 0      | 23.1-117  | S    | %REC      | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Surr: 2,4,6-Tribromophenol             | 0      | 22.7-88.9 | S    | %REC      | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Surr: Nitrobenzene-d5                  | 0      | 24.5-126  | S    | %REC      | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Surr: 2-Fluorobiphenyl                 | 0      | 21.2-129  | S    | %REC      | 10  | 9/23/2014 6:17:15 PM | 15394               |
| Surr: 4-Terphenyl-d14                  | 0      | 39.4-107  | S    | %REC      | 10  | 9/23/2014 6:17:15 PM | 15394               |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |     |                      | Analyst: <b>RAA</b> |
| Benzene                                | 9.5    | 0.61      |      | mg/Kg-dry | 20  | 9/19/2014 7:36:54 PM | R21325              |
| Toluene                                | 55     | 0.61      |      | mg/Kg-dry | 20  | 9/19/2014 7:36:54 PM | R21325              |
| Ethylbenzene                           | 100    | 15        |      | mg/Kg-dry | 500 | 9/20/2014 6:01:55 PM | R21355              |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.61      |      | mg/Kg-dry | 20  | 9/19/2014 7:36:54 PM | R21325              |
| 1,2,4-Trimethylbenzene                 | 170    | 15        |      | mg/Kg-dry | 500 | 9/20/2014 6:01:55 PM | R21355              |
| 1,3,5-Trimethylbenzene                 | 51     | 0.61      |      | mg/Kg-dry | 20  | 9/19/2014 7:36:54 PM | R21325              |
| 1,2-Dichloroethane (EDC)               | ND     | 0.61      |      | mg/Kg-dry | 20  | 9/19/2014 7:36:54 PM | R21325              |
| 1,2-Dibromoethane (EDB)                | ND     | 0.61      |      | mg/Kg-dry | 20  | 9/19/2014 7:36:54 PM | R21325              |
| Naphthalene                            | 27     | 1.2       |      | mg/Kg-dry | 20  | 9/19/2014 7:36:54 PM | R21325              |
| 1-Methylnaphthalene                    | 26     | 2.4       |      | mg/Kg-dry | 20  | 9/19/2014 7:36:54 PM | R21325              |
| 2-Methylnaphthalene                    | 51     | 2.4       |      | mg/Kg-dry | 20  | 9/19/2014 7:36:54 PM | R21325              |
| Acetone                                | ND     | 9.1       |      | mg/Kg-dry | 20  | 9/19/2014 7:36:54 PM | R21325              |
| Bromobenzene                           | ND     | 0.61      |      | mg/Kg-dry | 20  | 9/19/2014 7:36:54 PM | R21325              |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:30:00 AM

**Lab ID:** 1409955-004

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                           | Result | RL   | Qual | Units               | DF | Date Analyzed        | Batch  |
|------------------------------------|--------|------|------|---------------------|----|----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      | Analyst: <b>RAA</b> |    |                      |        |
| Bromodichloromethane               | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Bromoform                          | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Bromomethane                       | ND     | 1.8  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 2-Butanone                         | ND     | 6.1  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Carbon disulfide                   | ND     | 6.1  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Carbon tetrachloride               | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Chlorobenzene                      | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Chloroethane                       | ND     | 1.2  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Chloroform                         | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Chloromethane                      | ND     | 1.8  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 2-Chlorotoluene                    | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 4-Chlorotoluene                    | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| cis-1,2-DCE                        | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| cis-1,3-Dichloropropene            | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 1,2-Dibromo-3-chloropropane        | ND     | 1.2  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Dibromochloromethane               | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Dibromomethane                     | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 1,2-Dichlorobenzene                | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 1,3-Dichlorobenzene                | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 1,4-Dichlorobenzene                | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Dichlorodifluoromethane            | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 1,1-Dichloroethane                 | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 1,1-Dichloroethene                 | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 1,2-Dichloropropane                | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 1,3-Dichloropropane                | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 2,2-Dichloropropane                | ND     | 1.2  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 1,1-Dichloropropene                | ND     | 1.2  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Hexachlorobutadiene                | ND     | 1.2  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 2-Hexanone                         | ND     | 6.1  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Isopropylbenzene                   | 12     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 4-Isopropyltoluene                 | 3.4    | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 4-Methyl-2-pentanone               | ND     | 6.1  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Methylene chloride                 | ND     | 1.8  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| n-Butylbenzene                     | 16     | 1.8  |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| n-Propylbenzene                    | 46     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| sec-Butylbenzene                   | 7.0    | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| Styrene                            | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| tert-Butylbenzene                  | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.61 |      | mg/Kg-dry           | 20 | 9/19/2014 7:36:54 PM | R21325 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-5 (26-28')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 10:30:00 AM

**Lab ID:** 1409955-004

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF  | Date Analyzed        | Batch  |
|------------------------------------|--------|--------|------|---------------------|-----|----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |     |                      |        |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.61   |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| Tetrachloroethene (PCE)            | ND     | 0.61   |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| trans-1,2-DCE                      | ND     | 0.61   |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| trans-1,3-Dichloropropene          | ND     | 0.61   |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| 1,2,3-Trichlorobenzene             | ND     | 1.2    |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| 1,2,4-Trichlorobenzene             | ND     | 0.61   |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| 1,1,1-Trichloroethane              | ND     | 0.61   |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| 1,1,2-Trichloroethane              | ND     | 0.61   |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| Trichloroethene (TCE)              | ND     | 0.61   |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| Trichlorofluoromethane             | ND     | 0.61   |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| 1,2,3-Trichloropropane             | ND     | 1.2    |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| Vinyl chloride                     | ND     | 0.61   |      | mg/Kg-dry           | 20  | 9/19/2014 7:36:54 PM | R21325 |
| Xylenes, Total                     | 310    | 30     |      | mg/Kg-dry           | 500 | 9/20/2014 6:01:55 PM | R21355 |
| Surr: Dibromofluoromethane         | 91.6   | 70-130 |      | %REC                | 20  | 9/19/2014 7:36:54 PM | R21325 |
| Surr: 1,2-Dichloroethane-d4        | 95.0   | 70-130 |      | %REC                | 20  | 9/19/2014 7:36:54 PM | R21325 |
| Surr: Toluene-d8                   | 97.1   | 70-130 |      | %REC                | 20  | 9/19/2014 7:36:54 PM | R21325 |
| Surr: 4-Bromofluorobenzene         | 111    | 70-130 |      | %REC                | 20  | 9/19/2014 7:36:54 PM | R21325 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 21 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1409955**

Date Reported: **10/16/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:10:00 PM

**Lab ID:** 1409955-005

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units                | DF | Date Analyzed         | Batch  |
|------------------------------------------------|--------|----------|------|----------------------|----|-----------------------|--------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      | Analyst: <b>BCN</b>  |    |                       |        |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry            | 1  | 9/25/2014 4:50:39 AM  | 15397  |
| Motor Oil Range Organics (MRO)                 | ND     | 54       |      | mg/Kg-dry            | 1  | 9/25/2014 4:50:39 AM  | 15397  |
| Surr: DNOP                                     | 83.1   | 57.9-140 |      | %REC                 | 1  | 9/25/2014 4:50:39 AM  | 15397  |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      | Analyst: <b>NSB</b>  |    |                       |        |
| Gasoline Range Organics (GRO)                  | ND     | 3.5      |      | mg/Kg-dry            | 1  | 9/26/2014 12:33:20 AM | R21449 |
| Surr: BFB                                      | 89.0   | 80-120   |      | %REC                 | 1  | 9/26/2014 12:33:20 AM | R21449 |
| <b>PERCENT MOISTURE</b>                        |        |          |      | Analyst: <b>cadg</b> |    |                       |        |
| Percent Moisture                               | 6.7    | 1.0      |      | wt%                  | 1  | 9/19/2014 2:30:00 PM  | R21333 |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      | Analyst: <b>MMD</b>  |    |                       |        |
| Mercury                                        | ND     | 0.037    |      | mg/Kg-dry            | 1  | 9/26/2014 11:25:36 AM | 15505  |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      | Analyst: <b>ELS</b>  |    |                       |        |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Arsenic                                        | 3.8    | 2.6      |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Barium                                         | 190    | 0.10     |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Beryllium                                      | 0.52   | 0.16     |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Chromium                                       | 12     | 0.31     |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Cobalt                                         | 4.8    | 0.31     |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Lead                                           | 14     | 0.26     |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Nickel                                         | 7.0    | 0.52     |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Vanadium                                       | 26     | 2.6      |      | mg/Kg-dry            | 1  | 10/1/2014 1:16:26 PM  | 15558  |
| Zinc                                           | 38     | 2.6      |      | mg/Kg-dry            | 1  | 10/2/2014 12:24:58 PM | 15558  |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      | Analyst: <b>DAM</b>  |    |                       |        |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |
| Benzoic acid                                   | ND     | 0.54     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394  |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:10:00 PM

**Lab ID:** 1409955-005

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 4-Chloro-3-methylphenol                | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 4-Chloroaniline                        | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 2-Chloronaphthalene                    | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Di-n-butyl phthalate                   | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Di-n-octyl phthalate                   | ND     | 0.43 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 2,4-Dichlorophenol                     | ND     | 0.43 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 2,4-Dimethylphenol                     | ND     | 0.32 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 2,4-Dinitrophenol                      | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 2,4-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 2,6-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| Isophorone                             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 1-Methylnaphthalene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |
| 2-Methylnaphthalene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 5:19:49 PM | 15394               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:10:00 PM

**Lab ID:** 1409955-005

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result  | RL        | Qual | Units                | DF | Date Analyzed         | Batch |
|----------------------------------------|---------|-----------|------|----------------------|----|-----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      | Analyst: <b>DAM</b>  |    |                       |       |
| 2-Methylphenol                         | ND      | 0.54      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| 3+4-Methylphenol                       | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| N-Nitrosodi-n-propylamine              | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| N-Nitrosodiphenylamine                 | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Naphthalene                            | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| 2-Nitroaniline                         | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| 3-Nitroaniline                         | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| 4-Nitroaniline                         | ND      | 0.43      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Nitrobenzene                           | ND      | 0.54      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| 2-Nitrophenol                          | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| 4-Nitrophenol                          | ND      | 0.27      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Pentachlorophenol                      | ND      | 0.43      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Phenanthrene                           | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Phenol                                 | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Pyrene                                 | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Pyridine                               | ND      | 0.54      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| 1,2,4-Trichlorobenzene                 | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| 2,4,5-Trichlorophenol                  | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| 2,4,6-Trichlorophenol                  | ND      | 0.21      |      | mg/Kg-dry            | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Surr: 2-Fluorophenol                   | 51.7    | 21-111    |      | %REC                 | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Surr: Phenol-d5                        | 52.0    | 23.1-117  |      | %REC                 | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Surr: 2,4,6-Tribromophenol             | 52.2    | 22.7-88.9 |      | %REC                 | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Surr: Nitrobenzene-d5                  | 54.0    | 24.5-126  |      | %REC                 | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Surr: 2-Fluorobiphenyl                 | 54.4    | 21.2-129  |      | %REC                 | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| Surr: 4-Terphenyl-d14                  | 63.7    | 39.4-107  |      | %REC                 | 1  | 9/22/2014 5:19:49 PM  | 15394 |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      | Analyst: <b>cadg</b> |    |                       |       |
| Benzene                                | ND      | 0.00158   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| Toluene                                | 0.00216 | 0.00158   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| Ethylbenzene                           | ND      | 0.00158   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| Xylenes, Total                         | ND      | 0.00158   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00158   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| 1,2,4-Trimethylbenzene                 | ND      | 0.00158   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00158   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00158   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00158   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| Naphthalene                            | ND      | 0.00158   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| 1-Methylnaphthalene                    | ND      | 0.00315   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| 2-Methylnaphthalene                    | ND      | 0.00315   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |
| Acetone                                | 0.0259  | 0.00788   |      | mg/Kg-dry            | 1  | 9/20/2014 12:24:34 AM | 15407 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:10:00 PM

**Lab ID:** 1409955-005

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|-----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                       | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Bromodichloromethane                   | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Bromoform                              | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Bromomethane                           | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 2-Butanone                             | ND     | 0.00788 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Carbon tetrachloride                   | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Chlorobenzene                          | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Chloroethane                           | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Chloroform                             | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Chloromethane                          | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 2-Chlorotoluene                        | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Carbon disulfide                       | ND     | 0.00788 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 4-Chlorotoluene                        | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| cis-1,2-DCE                            | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| cis-1,3-Dichloropropene                | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Dibromochloromethane                   | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Dibromomethane                         | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 1,2-Dichlorobenzene                    | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 1,3-Dichlorobenzene                    | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 1,4-Dichlorobenzene                    | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Dichlorodifluoromethane                | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 1,1-Dichloroethane                     | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 1,1-Dichloroethene                     | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 1,2-Dichloropropane                    | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 1,3-Dichloropropane                    | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 2,2-Dichloropropane                    | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 1,1-Dichloropropene                    | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Hexachlorobutadiene                    | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Isopropylbenzene                       | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 4-Isopropyltoluene                     | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Methylene chloride                     | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| n-Butylbenzene                         | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 2-Hexanone                             | ND     | 0.00788 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| n-Propylbenzene                        | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| sec-Butylbenzene                       | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| Styrene                                | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| 4-Methyl-2-pentanone                   | ND     | 0.00788 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |
| tert-Butylbenzene                      | ND     | 0.00158 |      | mg/Kg-dry | 1  | 9/20/2014 12:24:34 AM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-1 (0-0.5')

Project: GROUP 9

Collection Date: 9/17/2014 1:10:00 PM

Lab ID: 1409955-005

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF            | Date Analyzed         | Batch |
|----------------------------------------|--------|----------|------|-----------|---------------|-----------------------|-------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           | Analyst: cadg |                       |       |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| Tetrachloroethene (PCE)                | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| trans-1,2-DCE                          | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| trans-1,3-Dichloropropene              | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| 1,1,1-Trichloroethane                  | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| 1,1,2-Trichloroethane                  | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| Trichloroethene (TCE)                  | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| Trichlorofluoromethane                 | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| 1,2,3-Trichloropropane                 | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| Vinyl chloride                         | ND     | 0.00158  |      | mg/Kg-dry | 1             | 9/20/2014 12:24:34 AM | 15407 |
| Surr: 1,2-Dichloroethane-d4            | 110    | 70-130   |      | %REC      | 1             | 9/20/2014 12:24:34 AM | 15407 |
| Surr: 4-Bromofluorobenzene             | 97.8   | 65.3-135 |      | %REC      | 1             | 9/20/2014 12:24:34 AM | 15407 |
| Surr: Dibromofluoromethane             | 91.6   | 70-130   |      | %REC      | 1             | 9/20/2014 12:24:34 AM | 15407 |
| Surr: Toluene-d8                       | 106    | 70-130   |      | %REC      | 1             | 9/20/2014 12:24:34 AM | 15407 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|             |   |                                                 |    |                                                    |               |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 26 of 82 |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (0.5-2.0')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:15:00 PM

**Lab ID:** 1409955-006

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 9/22/2014 2:00:53 PM  | 15397                |
| Motor Oil Range Organics (MRO)                 | ND     | 56       |      | mg/Kg-dry | 1  | 9/22/2014 2:00:53 PM  | 15397                |
| Surr: DNOP                                     | 110    | 57.9-140 |      | %REC      | 1  | 9/22/2014 2:00:53 PM  | 15397                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.7      |      | mg/Kg-dry | 1  | 9/26/2014 1:01:54 AM  | R21449               |
| Surr: BFB                                      | 90.4   | 80-120   |      | %REC      | 1  | 9/26/2014 1:01:54 AM  | R21449               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 10     | 1.0      |      | wt%       | 1  | 9/19/2014 2:30:00 PM  | R21333               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 9/26/2014 11:27:20 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Arsenic                                        | 3.1    | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Barium                                         | 230    | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Beryllium                                      | 0.58   | 0.17     |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Chromium                                       | 7.5    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Cobalt                                         | 5.0    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Lead                                           | 5.3    | 0.28     |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Nickel                                         | 7.6    | 0.55     |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Vanadium                                       | 25     | 2.8      |      | mg/Kg-dry | 1  | 10/1/2014 1:17:42 PM  | 15558                |
| Zinc                                           | 32     | 2.8      |      | mg/Kg-dry | 1  | 10/2/2014 12:26:12 PM | 15558                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |
| Benzoic acid                                   | ND     | 0.56     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (0.5-2.0')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:15:00 PM

**Lab ID:** 1409955-006

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch               |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 4-Chloro-3-methylphenol                | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 4-Chloroaniline                        | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 2-Chloronaphthalene                    | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Di-n-butyl phthalate                   | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Di-n-octyl phthalate                   | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 2,4-Dichlorophenol                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 2,4-Dinitrophenol                      | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 2,4-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 2,6-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| Isophorone                             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/22/2014 10:38:21 PM | 15394               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-1 (0.5-2.0')

Project: GROUP 9

Collection Date: 9/17/2014 1:15:00 PM

Lab ID: 1409955-006

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units                | DF | Date Analyzed         | Batch |
|----------------------------------------|--------|-----------|------|----------------------|----|-----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: <b>DAM</b>  |    |                       |       |
| 2-Methylphenol                         | ND     | 0.56      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| 3+4-Methylphenol                       | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| N-Nitrosodi-n-propylamine              | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| N-Nitrosodiphenylamine                 | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Naphthalene                            | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| 2-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| 3-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| 4-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Nitrobenzene                           | ND     | 0.56      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| 2-Nitrophenol                          | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| 4-Nitrophenol                          | ND     | 0.28      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Pentachlorophenol                      | ND     | 0.45      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Phenanthrene                           | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Phenol                                 | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Pyrene                                 | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Pyridine                               | ND     | 0.56      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| 2,4,5-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| 2,4,6-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry            | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Surr: 2-Fluorophenol                   | 59.1   | 21-111    |      | %REC                 | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Surr: Phenol-d5                        | 59.8   | 23.1-117  |      | %REC                 | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Surr: 2,4,6-Tribromophenol             | 49.8   | 22.7-88.9 |      | %REC                 | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Surr: Nitrobenzene-d5                  | 64.0   | 24.5-126  |      | %REC                 | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Surr: 2-Fluorobiphenyl                 | 64.2   | 21.2-129  |      | %REC                 | 1  | 9/22/2014 10:38:21 PM | 15394 |
| Surr: 4-Terphenyl-d14                  | 61.4   | 39.4-107  |      | %REC                 | 1  | 9/22/2014 10:38:21 PM | 15394 |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      | Analyst: <b>cadg</b> |    |                       |       |
| Benzene                                | ND     | 0.00149   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| Toluene                                | ND     | 0.00149   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| Ethylbenzene                           | ND     | 0.00149   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| Xylenes, Total                         | ND     | 0.00149   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00149   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00149   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00149   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00149   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00149   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| Naphthalene                            | ND     | 0.00149   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| 1-Methylnaphthalene                    | ND     | 0.00299   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| 2-Methylnaphthalene                    | ND     | 0.00299   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |
| Acetone                                | 0.0196 | 0.00746   |      | mg/Kg-dry            | 1  | 9/20/2014 12:53:15 AM | 15407 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (0.5-2.0')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:15:00 PM

**Lab ID:** 1409955-006

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|-----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                       | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Bromodichloromethane                   | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Bromoform                              | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Bromomethane                           | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 2-Butanone                             | ND     | 0.00746 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Carbon tetrachloride                   | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Chlorobenzene                          | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Chloroethane                           | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Chloroform                             | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Chloromethane                          | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 2-Chlorotoluene                        | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Carbon disulfide                       | ND     | 0.00746 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 4-Chlorotoluene                        | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| cis-1,2-DCE                            | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| cis-1,3-Dichloropropene                | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Dibromochloromethane                   | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Dibromomethane                         | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,2-Dichlorobenzene                    | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,3-Dichlorobenzene                    | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,4-Dichlorobenzene                    | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Dichlorodifluoromethane                | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,1-Dichloroethane                     | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,1-Dichloroethene                     | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,2-Dichloropropane                    | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,3-Dichloropropane                    | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 2,2-Dichloropropane                    | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,1-Dichloropropene                    | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Hexachlorobutadiene                    | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Isopropylbenzene                       | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 4-Isopropyltoluene                     | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Methylene chloride                     | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| n-Butylbenzene                         | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 2-Hexanone                             | ND     | 0.00746 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| n-Propylbenzene                        | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| sec-Butylbenzene                       | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Styrene                                | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 4-Methyl-2-pentanone                   | ND     | 0.00746 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| tert-Butylbenzene                      | ND     | 0.00149 |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (0.5-2.0')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:15:00 PM

**Lab ID:** 1409955-006

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|-----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                       | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Tetrachloroethene (PCE)                | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| trans-1,2-DCE                          | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| trans-1,3-Dichloropropene              | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,1,1-Trichloroethane                  | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,1,2-Trichloroethane                  | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Trichloroethene (TCE)                  | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Trichlorofluoromethane                 | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| 1,2,3-Trichloropropane                 | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Vinyl chloride                         | ND     | 0.00149  |      | mg/Kg-dry | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Surr: 1,2-Dichloroethane-d4            | 98.8   | 70-130   |      | %REC      | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Surr: 4-Bromofluorobenzene             | 110    | 65.3-135 |      | %REC      | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Surr: Dibromofluoromethane             | 89.5   | 70-130   |      | %REC      | 1  | 9/20/2014 12:53:15 AM | 15407         |
| Surr: Toluene-d8                       | 101    | 70-130   |      | %REC      | 1  | 9/20/2014 12:53:15 AM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (8-10')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:20:00 PM

**Lab ID:** 1409955-007

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units                | DF | Date Analyzed         | Batch  |
|------------------------------------------------|--------|----------|------|----------------------|----|-----------------------|--------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      | Analyst: <b>BCN</b>  |    |                       |        |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry            | 1  | 9/22/2014 2:22:20 PM  | 15397  |
| Motor Oil Range Organics (MRO)                 | ND     | 57       |      | mg/Kg-dry            | 1  | 9/22/2014 2:22:20 PM  | 15397  |
| Surr: DNOP                                     | 110    | 57.9-140 |      | %REC                 | 1  | 9/22/2014 2:22:20 PM  | 15397  |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      | Analyst: <b>NSB</b>  |    |                       |        |
| Gasoline Range Organics (GRO)                  | ND     | 3.4      |      | mg/Kg-dry            | 1  | 9/26/2014 1:30:31 AM  | R21449 |
| Surr: BFB                                      | 90.4   | 80-120   |      | %REC                 | 1  | 9/26/2014 1:30:31 AM  | R21449 |
| <b>PERCENT MOISTURE</b>                        |        |          |      | Analyst: <b>cadg</b> |    |                       |        |
| Percent Moisture                               | 12     | 1.0      |      | wt%                  | 1  | 9/19/2014 2:30:00 PM  | R21333 |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      | Analyst: <b>MMD</b>  |    |                       |        |
| Mercury                                        | ND     | 0.039    |      | mg/Kg-dry            | 1  | 9/26/2014 11:29:04 AM | 15505  |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      | Analyst: <b>ELS</b>  |    |                       |        |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Arsenic                                        | 2.8    | 2.7      |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Barium                                         | 140    | 0.11     |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Beryllium                                      | 0.54   | 0.16     |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Chromium                                       | 6.9    | 0.33     |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Cobalt                                         | 4.4    | 0.33     |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Lead                                           | 4.4    | 0.27     |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Nickel                                         | 7.0    | 0.54     |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Vanadium                                       | 23     | 2.7      |      | mg/Kg-dry            | 1  | 10/1/2014 1:19:03 PM  | 15558  |
| Zinc                                           | 29     | 2.7      |      | mg/Kg-dry            | 1  | 10/2/2014 12:27:26 PM | 15558  |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      | Analyst: <b>DAM</b>  |    |                       |        |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |
| Benzoic acid                                   | ND     | 0.56     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM  | 15394  |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (8-10')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:20:00 PM

**Lab ID:** 1409955-007

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 4-Chloro-3-methylphenol                | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 4-Chloroaniline                        | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 2-Chloronaphthalene                    | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Di-n-butyl phthalate                   | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Di-n-octyl phthalate                   | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.28 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 2,4-Dichlorophenol                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 2,4-Dinitrophenol                      | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 2,4-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 2,6-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| Isophorone                             | ND     | 0.56 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 1-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |
| 2-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 9/22/2014 5:48:57 PM | 15394               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-1 (8-10')

Project: GROUP 9

Collection Date: 9/17/2014 1:20:00 PM

Lab ID: 1409955-007

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

| Analyses                               | Result  | RL        | Qual | Units                | DF | Date Analyzed        | Batch |
|----------------------------------------|---------|-----------|------|----------------------|----|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      | Analyst: <b>DAM</b>  |    |                      |       |
| 2-Methylphenol                         | ND      | 0.56      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| 3+4-Methylphenol                       | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| N-Nitrosodi-n-propylamine              | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| N-Nitrosodiphenylamine                 | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Naphthalene                            | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| 2-Nitroaniline                         | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| 3-Nitroaniline                         | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| 4-Nitroaniline                         | ND      | 0.45      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Nitrobenzene                           | ND      | 0.56      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| 2-Nitrophenol                          | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| 4-Nitrophenol                          | ND      | 0.28      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Pentachlorophenol                      | ND      | 0.45      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Phenanthrene                           | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Phenol                                 | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Pyrene                                 | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Pyridine                               | ND      | 0.56      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| 1,2,4-Trichlorobenzene                 | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| 2,4,5-Trichlorophenol                  | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| 2,4,6-Trichlorophenol                  | ND      | 0.23      |      | mg/Kg-dry            | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Surr: 2-Fluorophenol                   | 77.1    | 21-111    |      | %REC                 | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Surr: Phenol-d5                        | 76.3    | 23.1-117  |      | %REC                 | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Surr: 2,4,6-Tribromophenol             | 74.9    | 22.7-88.9 |      | %REC                 | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Surr: Nitrobenzene-d5                  | 82.1    | 24.5-126  |      | %REC                 | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Surr: 2-Fluorobiphenyl                 | 78.9    | 21.2-129  |      | %REC                 | 1  | 9/22/2014 5:48:57 PM | 15394 |
| Surr: 4-Terphenyl-d14                  | 91.0    | 39.4-107  |      | %REC                 | 1  | 9/22/2014 5:48:57 PM | 15394 |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      | Analyst: <b>cadg</b> |    |                      |       |
| Benzene                                | 0.00169 | 0.00154   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| Toluene                                | ND      | 0.00154   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| Ethylbenzene                           | 0.00610 | 0.00154   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| Xylenes, Total                         | 0.00428 | 0.00154   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00154   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| 1,2,4-Trimethylbenzene                 | 0.0139  | 0.00154   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00154   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00154   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00154   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| Naphthalene                            | 0.0108  | 0.00154   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| 1-Methylnaphthalene                    | 0.00604 | 0.00308   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| 2-Methylnaphthalene                    | 0.0117  | 0.00308   |      | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |
| Acetone                                | 0.278   | 0.00771   | E    | mg/Kg-dry            | 1  | 9/20/2014 1:21:56 AM | 15407 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-1 (8-10')

Project: GROUP 9

Collection Date: 9/17/2014 1:20:00 PM

Lab ID: 1409955-007

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

| Analyses                               | Result  | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Bromodichloromethane                   | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Bromoform                              | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Bromomethane                           | 0.00585 | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 2-Butanone                             | 0.0959  | 0.00771 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Carbon tetrachloride                   | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Chlorobenzene                          | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Chloroethane                           | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Chloroform                             | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Chloromethane                          | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 2-Chlorotoluene                        | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Carbon disulfide                       | 0.0156  | 0.00771 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 4-Chlorotoluene                        | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| cis-1,2-DCE                            | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| cis-1,3-Dichloropropene                | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,2-Dibromo-3-chloropropane            | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Dibromochloromethane                   | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Dibromomethane                         | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,2-Dichlorobenzene                    | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,3-Dichlorobenzene                    | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,4-Dichlorobenzene                    | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Dichlorodifluoromethane                | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,1-Dichloroethane                     | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,1-Dichloroethene                     | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,2-Dichloropropane                    | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,3-Dichloropropane                    | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 2,2-Dichloropropane                    | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,1-Dichloropropene                    | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Hexachlorobutadiene                    | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Isopropylbenzene                       | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 4-Isopropyltoluene                     | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Methylene chloride                     | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| n-Butylbenzene                         | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 2-Hexanone                             | ND      | 0.00771 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| n-Propylbenzene                        | 0.00294 | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| sec-Butylbenzene                       | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Styrene                                | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 4-Methyl-2-pentanone                   | ND      | 0.00771 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| tert-Butylbenzene                      | ND      | 0.00154 |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (8-10')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:20:00 PM

**Lab ID:** 1409955-007

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Tetrachloroethene (PCE)                | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| trans-1,2-DCE                          | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| trans-1,3-Dichloropropene              | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,1,1-Trichloroethane                  | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,1,2-Trichloroethane                  | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Trichloroethene (TCE)                  | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Trichlorofluoromethane                 | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| 1,2,3-Trichloropropane                 | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Vinyl chloride                         | ND     | 0.00154  |      | mg/Kg-dry | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Surr: 1,2-Dichloroethane-d4            | 110    | 70-130   |      | %REC      | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Surr: 4-Bromofluorobenzene             | 111    | 65.3-135 |      | %REC      | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Surr: Dibromofluoromethane             | 92.1   | 70-130   |      | %REC      | 1  | 9/20/2014 1:21:56 AM | 15407         |
| Surr: Toluene-d8                       | 97.1   | 70-130   |      | %REC      | 1  | 9/20/2014 1:21:56 AM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 36 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:30:00 PM

**Lab ID:** 1409955-008

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 540    | 10       |      | mg/Kg-dry | 1  | 9/22/2014 2:45:02 PM  | 15397                |
| Motor Oil Range Organics (MRO)                 | ND     | 52       |      | mg/Kg-dry | 1  | 9/22/2014 2:45:02 PM  | 15397                |
| Surr: DNOP                                     | 113    | 57.9-140 |      | %REC      | 1  | 9/22/2014 2:45:02 PM  | 15397                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 82     | 18       |      | mg/Kg-dry | 5  | 9/26/2014 1:59:00 AM  | R21449               |
| Surr: BFB                                      | 206    | 80-120   | S    | %REC      | 5  | 9/26/2014 1:59:00 AM  | R21449               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 3.1    | 1.0      |      | wt%       | 1  | 9/19/2014 2:30:00 PM  | R21333               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.034    |      | mg/Kg-dry | 1  | 9/26/2014 11:30:50 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Barium                                         | 94     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Chromium                                       | 60     | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Cobalt                                         | 2.5    | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Lead                                           | 2.3    | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Nickel                                         | 4.6    | 0.51     |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Vanadium                                       | 11     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:20:17 PM  | 15558                |
| Zinc                                           | 9.8    | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 12:28:41 PM | 15558                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>DAM</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM  | 15394                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:30:00 PM

**Lab ID:** 1409955-008

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: <b>DAM</b> |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Di-n-octyl phthalate                   | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2,4-Dichlorophenol                     | ND     | 0.41 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Fluorene                               | 0.27   | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 1-Methylnaphthalene                    | 2.7    | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2-Methylnaphthalene                    | 4.1    | 0.21 |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:30:00 PM

**Lab ID:** 1409955-008

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch               |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: <b>DAM</b> |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Naphthalene                            | 1.3    | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 4-Nitroaniline                         | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Pentachlorophenol                      | ND     | 0.41      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Phenanthrene                           | 0.73   | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Surr: 2-Fluorophenol                   | 63.0   | 21-111    |      | %REC      | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Surr: Phenol-d5                        | 66.7   | 23.1-117  |      | %REC      | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Surr: 2,4,6-Tribromophenol             | 34.5   | 22.7-88.9 |      | %REC      | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Surr: Nitrobenzene-d5                  | 71.3   | 24.5-126  |      | %REC      | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Surr: 2-Fluorobiphenyl                 | 62.9   | 21.2-129  |      | %REC      | 1  | 9/22/2014 6:18:04 PM | 15394               |
| Surr: 4-Terphenyl-d14                  | 79.6   | 39.4-107  |      | %REC      | 1  | 9/22/2014 6:18:04 PM | 15394               |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: <b>RAA</b> |
| Benzene                                | ND     | 0.037     |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Toluene                                | ND     | 0.037     |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Ethylbenzene                           | 1.4    | 0.037     |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.037     |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| 1,2,4-Trimethylbenzene                 | 10     | 0.37      |      | mg/Kg-dry | 10 | 9/20/2014 8:21:42 PM | R21355              |
| 1,3,5-Trimethylbenzene                 | ND     | 0.037     |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| 1,2-Dichloroethane (EDC)               | ND     | 0.037     |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| 1,2-Dibromoethane (EDB)                | ND     | 0.037     |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Naphthalene                            | 3.5    | 0.074     |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| 1-Methylnaphthalene                    | 5.2    | 1.5       |      | mg/Kg-dry | 10 | 9/20/2014 8:21:42 PM | R21355              |
| 2-Methylnaphthalene                    | 9.6    | 1.5       |      | mg/Kg-dry | 10 | 9/20/2014 8:21:42 PM | R21355              |
| Acetone                                | ND     | 0.55      |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Bromobenzene                           | ND     | 0.037     |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:30:00 PM

**Lab ID:** 1409955-008

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                           | Result | RL    | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|-------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |       |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Bromoform                          | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Bromomethane                       | ND     | 0.11  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 2-Butanone                         | ND     | 0.37  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Carbon disulfide                   | ND     | 0.37  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Carbon tetrachloride               | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Chlorobenzene                      | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Chloroethane                       | ND     | 0.074 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Chloroform                         | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Chloromethane                      | ND     | 0.11  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 2-Chlorotoluene                    | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 4-Chlorotoluene                    | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| cis-1,2-DCE                        | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| cis-1,3-Dichloropropene            | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.074 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Dibromochloromethane               | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Dibromomethane                     | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 1,2-Dichlorobenzene                | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 1,3-Dichlorobenzene                | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 1,4-Dichlorobenzene                | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Dichlorodifluoromethane            | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 1,1-Dichloroethane                 | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 1,1-Dichloroethene                 | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 1,2-Dichloropropane                | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 1,3-Dichloropropane                | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 2,2-Dichloropropane                | ND     | 0.074 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 1,1-Dichloropropene                | ND     | 0.074 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Hexachlorobutadiene                | ND     | 0.074 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 2-Hexanone                         | ND     | 0.37  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Isopropylbenzene                   | 0.34   | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 4-Isopropyltoluene                 | 0.13   | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 4-Methyl-2-pentanone               | ND     | 0.37  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Methylene chloride                 | ND     | 0.11  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| n-Butylbenzene                     | 1.2    | 0.11  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| n-Propylbenzene                    | 1.5    | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| sec-Butylbenzene                   | 0.35   | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| Styrene                            | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| tert-Butylbenzene                  | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.037 |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355       |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-1 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 1:30:00 PM

**Lab ID:** 1409955-008

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units     | DF | Date Analyzed        | Batch               |
|------------------------------------|--------|--------|------|-----------|----|----------------------|---------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      |           |    |                      | Analyst: <b>RAA</b> |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.037  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Tetrachloroethene (PCE)            | ND     | 0.037  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| trans-1,2-DCE                      | ND     | 0.037  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| trans-1,3-Dichloropropene          | ND     | 0.037  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| 1,2,3-Trichlorobenzene             | ND     | 0.074  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| 1,2,4-Trichlorobenzene             | ND     | 0.037  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| 1,1,1-Trichloroethane              | ND     | 0.037  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| 1,1,2-Trichloroethane              | ND     | 0.037  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Trichloroethene (TCE)              | ND     | 0.037  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Trichlorofluoromethane             | ND     | 0.037  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| 1,2,3-Trichloropropane             | ND     | 0.074  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Vinyl chloride                     | ND     | 0.037  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Xylenes, Total                     | ND     | 0.074  |      | mg/Kg-dry | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Surr: Dibromofluoromethane         | 86.0   | 70-130 |      | %REC      | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Surr: 1,2-Dichloroethane-d4        | 92.2   | 70-130 |      | %REC      | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Surr: Toluene-d8                   | 89.3   | 70-130 |      | %REC      | 1  | 9/20/2014 6:29:53 PM | R21355              |
| Surr: 4-Bromofluorobenzene         | 115    | 70-130 |      | %REC      | 1  | 9/20/2014 6:29:53 PM | R21355              |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 41 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 3:40:00 PM

**Lab ID:** 1409955-009

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 9/22/2014 3:06:41 PM  | 15397                |
| Motor Oil Range Organics (MRO)                 | ND     | 54       |      | mg/Kg-dry | 1  | 9/22/2014 3:06:41 PM  | 15397                |
| Surr: DNOP                                     | 111    | 57.9-140 |      | %REC      | 1  | 9/22/2014 3:06:41 PM  | 15397                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.8      |      | mg/Kg-dry | 1  | 9/26/2014 2:27:35 AM  | R21449               |
| Surr: BFB                                      | 91.9   | 80-120   |      | %REC      | 1  | 9/26/2014 2:27:35 AM  | R21449               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 8.0    | 1.0      |      | wt%       | 1  | 9/19/2014 2:30:00 PM  | R21333               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.035    |      | mg/Kg-dry | 1  | 9/26/2014 11:36:21 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Arsenic                                        | 3.1    | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Barium                                         | 210    | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Beryllium                                      | 0.50   | 0.16     |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Chromium                                       | 5.8    | 0.32     |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Cobalt                                         | 4.9    | 0.32     |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Lead                                           | 7.1    | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Nickel                                         | 6.6    | 0.54     |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Vanadium                                       | 24     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:21:36 PM  | 15558                |
| Zinc                                           | 33     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 12:33:50 PM | 15558                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |
| Benzoic acid                                   | ND     | 0.54     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 3:40:00 PM

**Lab ID:** 1409955-009

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed         | Batch        |
|----------------------------------------|--------|------|------|-----------|----|-----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                       | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 4-Chloroaniline                        | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.33 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| Isophorone                             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 3:40:00 PM

**Lab ID:** 1409955-009

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|-----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                       | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| 3+4-Methylphenol                       | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| N-Nitrosodi-n-propylamine              | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| N-Nitrosodiphenylamine                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Naphthalene                            | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| 2-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| 3-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| 4-Nitroaniline                         | ND      | 0.44      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Nitrobenzene                           | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| 2-Nitrophenol                          | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| 4-Nitrophenol                          | ND      | 0.27      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Pentachlorophenol                      | ND      | 0.44      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Phenanthrene                           | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Phenol                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Pyrene                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Pyridine                               | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| 2,4,5-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| 2,4,6-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Surr: 2-Fluorophenol                   | 56.6    | 21-111    |      | %REC      | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Surr: Phenol-d5                        | 63.1    | 23.1-117  |      | %REC      | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Surr: 2,4,6-Tribromophenol             | 31.4    | 22.7-88.9 |      | %REC      | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Surr: Nitrobenzene-d5                  | 60.5    | 24.5-126  |      | %REC      | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Surr: 2-Fluorobiphenyl                 | 58.6    | 21.2-129  |      | %REC      | 1  | 9/26/2014 12:14:53 AM | 15483         |
| Surr: 4-Terphenyl-d14                  | 58.7    | 39.4-107  |      | %REC      | 1  | 9/26/2014 12:14:53 AM | 15483         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                       | Analyst: cadg |
| Benzene                                | ND      | 0.00174   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| Toluene                                | 0.00356 | 0.00174   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| Ethylbenzene                           | ND      | 0.00174   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| Xylenes, Total                         | ND      | 0.00174   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00174   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| 1,2,4-Trimethylbenzene                 | ND      | 0.00174   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00174   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00174   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00174   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| Naphthalene                            | ND      | 0.00174   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| 1-Methylnaphthalene                    | ND      | 0.00347   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| 2-Methylnaphthalene                    | ND      | 0.00347   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |
| Acetone                                | 0.0254  | 0.00868   |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM  | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 3:40:00 PM

**Lab ID:** 1409955-009

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Bromodichloromethane                   | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Bromoform                              | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Bromomethane                           | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 2-Butanone                             | ND     | 0.00868 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Carbon tetrachloride                   | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Chlorobenzene                          | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Chloroethane                           | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Chloroform                             | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Chloromethane                          | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 2-Chlorotoluene                        | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Carbon disulfide                       | ND     | 0.00868 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 4-Chlorotoluene                        | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| cis-1,2-DCE                            | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| cis-1,3-Dichloropropene                | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Dibromochloromethane                   | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Dibromomethane                         | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,2-Dichlorobenzene                    | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,3-Dichlorobenzene                    | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,4-Dichlorobenzene                    | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Dichlorodifluoromethane                | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,1-Dichloroethane                     | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,1-Dichloroethene                     | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,2-Dichloropropane                    | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,3-Dichloropropane                    | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 2,2-Dichloropropane                    | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,1-Dichloropropene                    | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Hexachlorobutadiene                    | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Isopropylbenzene                       | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 4-Isopropyltoluene                     | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Methylene chloride                     | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| n-Butylbenzene                         | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 2-Hexanone                             | ND     | 0.00868 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| n-Propylbenzene                        | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| sec-Butylbenzene                       | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Styrene                                | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 4-Methyl-2-pentanone                   | ND     | 0.00868 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| tert-Butylbenzene                      | ND     | 0.00174 |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 3:40:00 PM

**Lab ID:** 1409955-009

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Tetrachloroethene (PCE)                | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| trans-1,2-DCE                          | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| trans-1,3-Dichloropropene              | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,1,1-Trichloroethane                  | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,1,2-Trichloroethane                  | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Trichloroethene (TCE)                  | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Trichlorofluoromethane                 | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| 1,2,3-Trichloropropane                 | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Vinyl chloride                         | ND     | 0.00174  |      | mg/Kg-dry | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Surr: 1,2-Dichloroethane-d4            | 114    | 70-130   |      | %REC      | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Surr: 4-Bromofluorobenzene             | 103    | 65.3-135 |      | %REC      | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Surr: Dibromofluoromethane             | 99.6   | 70-130   |      | %REC      | 1  | 9/20/2014 2:19:21 AM | 15407         |
| Surr: Toluene-d8                       | 105    | 70-130   |      | %REC      | 1  | 9/20/2014 2:19:21 AM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 46 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 3:50:00 PM

**Lab ID:** 1409955-010

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 9/22/2014 3:28:17 PM  | 15397                |
| Motor Oil Range Organics (MRO)                 | ND     | 54       |      | mg/Kg-dry | 1  | 9/22/2014 3:28:17 PM  | 15397                |
| Surr: DNOP                                     | 114    | 57.9-140 |      | %REC      | 1  | 9/22/2014 3:28:17 PM  | 15397                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.7      |      | mg/Kg-dry | 1  | 9/26/2014 2:56:05 AM  | R21449               |
| Surr: BFB                                      | 96.2   | 80-120   |      | %REC      | 1  | 9/26/2014 2:56:05 AM  | R21449               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 8.3    | 1.0      |      | wt%       | 1  | 9/19/2014 2:30:00 PM  | R21333               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.036    |      | mg/Kg-dry | 1  | 9/26/2014 11:38:08 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Arsenic                                        | 2.9    | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Barium                                         | 210    | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Beryllium                                      | 0.48   | 0.16     |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Chromium                                       | 5.7    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Cobalt                                         | 4.8    | 0.33     |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Lead                                           | 4.1    | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Nickel                                         | 6.5    | 0.54     |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Vanadium                                       | 24     | 2.7      |      | mg/Kg-dry | 1  | 10/1/2014 1:22:59 PM  | 15558                |
| Zinc                                           | 27     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 12:35:07 PM | 15558                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |
| Benzoic acid                                   | ND     | 0.54     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM  | 15483                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 3:50:00 PM

**Lab ID:** 1409955-010

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 4-Chloro-3-methylphenol                | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 4-Chloroaniline                        | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 2-Chloronaphthalene                    | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Di-n-butyl phthalate                   | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Di-n-octyl phthalate                   | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.27 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 2,4-Dichlorophenol                     | ND     | 0.44 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 2,4-Dimethylphenol                     | ND     | 0.33 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 2,4-Dinitrophenol                      | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 2,4-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 2,6-Dinitrotoluene                     | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| Isophorone                             | ND     | 0.54 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-2 (0.5-2')

Project: GROUP 9

Collection Date: 9/17/2014 3:50:00 PM

Lab ID: 1409955-010

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| 3+4-Methylphenol                       | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| N-Nitrosodi-n-propylamine              | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| N-Nitrosodiphenylamine                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Naphthalene                            | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| 2-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| 3-Nitroaniline                         | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| 4-Nitroaniline                         | ND      | 0.44      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Nitrobenzene                           | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| 2-Nitrophenol                          | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| 4-Nitrophenol                          | ND      | 0.27      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Pentachlorophenol                      | ND      | 0.44      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Phenanthrene                           | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Phenol                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Pyrene                                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Pyridine                               | ND      | 0.54      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| 2,4,5-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| 2,4,6-Trichlorophenol                  | ND      | 0.22      |      | mg/Kg-dry | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Surr: 2-Fluorophenol                   | 76.2    | 21-111    |      | %REC      | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Surr: Phenol-d5                        | 83.0    | 23.1-117  |      | %REC      | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Surr: 2,4,6-Tribromophenol             | 67.6    | 22.7-88.9 |      | %REC      | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Surr: Nitrobenzene-d5                  | 82.8    | 24.5-126  |      | %REC      | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Surr: 2-Fluorobiphenyl                 | 78.2    | 21.2-129  |      | %REC      | 1  | 9/26/2014 1:38:27 AM | 15483         |
| Surr: 4-Terphenyl-d14                  | 77.6    | 39.4-107  |      | %REC      | 1  | 9/26/2014 1:38:27 AM | 15483         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | 0.00272 | 0.00213   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Toluene                                | 0.00221 | 0.00213   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Ethylbenzene                           | 0.00414 | 0.00213   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Xylenes, Total                         | 0.00345 | 0.00213   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00213   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,2,4-Trimethylbenzene                 | 0.0145  | 0.00213   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,3,5-Trimethylbenzene                 | 0.00497 | 0.00213   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00213   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00213   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Naphthalene                            | 0.00307 | 0.00213   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1-Methylnaphthalene                    | ND      | 0.00425   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 2-Methylnaphthalene                    | ND      | 0.00425   |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Acetone                                | 0.190   | 0.0106    |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (0.5-2')

**Project:** GROUP 9

**Collection Date:** 9/17/2014 3:50:00 PM

**Lab ID:** 1409955-010

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Bromodichloromethane                   | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Bromoform                              | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Bromomethane                           | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 2-Butanone                             | 0.0185 | 0.0106  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Carbon tetrachloride                   | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Chlorobenzene                          | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Chloroethane                           | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Chloroform                             | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Chloromethane                          | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 2-Chlorotoluene                        | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Carbon disulfide                       | ND     | 0.0106  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 4-Chlorotoluene                        | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| cis-1,2-DCE                            | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| cis-1,3-Dichloropropene                | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Dibromochloromethane                   | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Dibromomethane                         | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,2-Dichlorobenzene                    | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,3-Dichlorobenzene                    | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,4-Dichlorobenzene                    | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Dichlorodifluoromethane                | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,1-Dichloroethane                     | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,1-Dichloroethene                     | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,2-Dichloropropane                    | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,3-Dichloropropane                    | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 2,2-Dichloropropane                    | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,1-Dichloropropene                    | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Hexachlorobutadiene                    | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Isopropylbenzene                       | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 4-Isopropyltoluene                     | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Methylene chloride                     | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| n-Butylbenzene                         | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 2-Hexanone                             | ND     | 0.0106  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| n-Propylbenzene                        | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| sec-Butylbenzene                       | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Styrene                                | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 4-Methyl-2-pentanone                   | ND     | 0.0106  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| tert-Butylbenzene                      | ND     | 0.00213 |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-2 (0.5-2')

Project: GROUP 9

Collection Date: 9/17/2014 3:50:00 PM

Lab ID: 1409955-010

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Tetrachloroethene (PCE)                | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| trans-1,2-DCE                          | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| trans-1,3-Dichloropropene              | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,1,1-Trichloroethane                  | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,1,2-Trichloroethane                  | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Trichloroethene (TCE)                  | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Trichlorofluoromethane                 | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| 1,2,3-Trichloropropane                 | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Vinyl chloride                         | ND     | 0.00213  |      | mg/Kg-dry | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Surr: 1,2-Dichloroethane-d4            | 117    | 70-130   |      | %REC      | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Surr: 4-Bromofluorobenzene             | 88.6   | 65.3-135 |      | %REC      | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Surr: Dibromofluoromethane             | 109    | 70-130   |      | %REC      | 1  | 9/20/2014 2:48:02 AM | 15407         |
| Surr: Toluene-d8                       | 96.1   | 70-130   |      | %REC      | 1  | 9/20/2014 2:48:02 AM | 15407         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|             |   |                                                 |    |                                                    |               |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 51 of 82 |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 10:40:00 AM

**Lab ID:** 1409955-011

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 300    | 10       |      | mg/Kg-dry | 1  | 9/22/2014 3:50:01 PM  | 15397                |
| Motor Oil Range Organics (MRO)                 | ND     | 52       |      | mg/Kg-dry | 1  | 9/22/2014 3:50:01 PM  | 15397                |
| Surr: DNOP                                     | 112    | 57.9-140 |      | %REC      | 1  | 9/22/2014 3:50:01 PM  | 15397                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 45     | 18       |      | mg/Kg-dry | 5  | 9/27/2014 12:04:48 AM | R21485               |
| Surr: BFB                                      | 134    | 80-120   | S    | %REC      | 5  | 9/27/2014 12:04:48 AM | R21485               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 4.7    | 1.0      |      | wt%       | 1  | 9/19/2014 2:30:00 PM  | R21333               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.033    |      | mg/Kg-dry | 1  | 9/26/2014 11:39:55 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Arsenic                                        | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Barium                                         | 130    | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Chromium                                       | 3.6    | 0.30     |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Cobalt                                         | 3.2    | 0.30     |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Lead                                           | 2.3    | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Nickel                                         | 2.8    | 0.50     |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Selenium                                       | ND     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Silver                                         | ND     | 0.25     |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Vanadium                                       | 13     | 2.5      |      | mg/Kg-dry | 1  | 10/1/2014 1:28:06 PM  | 15558                |
| Zinc                                           | 9.9    | 2.5      |      | mg/Kg-dry | 1  | 10/2/2014 12:36:22 PM | 15558                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:12:32 PM  | 15483                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 10:40:00 AM

**Lab ID:** 1409955-011

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units        | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|------|------|--------------|----|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      | Analyst: JDC |    |                      |       |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Fluorene                               | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 1-Methylnaphthalene                    | 2.3    | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |
| 2-Methylnaphthalene                    | 3.8    | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 10:40:00 AM

**Lab ID:** 1409955-011

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units        | DF | Date Analyzed        | Batch  |
|----------------------------------------|--------|-----------|------|--------------|----|----------------------|--------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC |    |                      |        |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Naphthalene                            | 1.4    | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Phenanthrene                           | 0.33   | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry    | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Surr: 2-Fluorophenol                   | 70.3   | 21-111    |      | %REC         | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Surr: Phenol-d5                        | 71.6   | 23.1-117  |      | %REC         | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Surr: 2,4,6-Tribromophenol             | 77.1   | 22.7-88.9 |      | %REC         | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Surr: Nitrobenzene-d5                  | 73.7   | 24.5-126  |      | %REC         | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Surr: 2-Fluorobiphenyl                 | 71.4   | 21.2-129  |      | %REC         | 1  | 9/25/2014 6:12:32 PM | 15483  |
| Surr: 4-Terphenyl-d14                  | 76.4   | 39.4-107  |      | %REC         | 1  | 9/25/2014 6:12:32 PM | 15483  |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      | Analyst: RAA |    |                      |        |
| Benzene                                | ND     | 0.18      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Toluene                                | ND     | 0.18      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Ethylbenzene                           | 0.97   | 0.18      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.18      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| 1,2,4-Trimethylbenzene                 | 6.4    | 0.18      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| 1,3,5-Trimethylbenzene                 | 0.18   | 0.18      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.18      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.18      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Naphthalene                            | 2.2    | 0.36      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| 1-Methylnaphthalene                    | 2.6    | 0.71      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| 2-Methylnaphthalene                    | 5.0    | 0.71      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Acetone                                | ND     | 2.7       |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Bromobenzene                           | ND     | 0.18      |      | mg/Kg-dry    | 5  | 9/20/2014 6:57:49 PM | R21355 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 10:40:00 AM

**Lab ID:** 1409955-011

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                           | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      |           |    |                      | Analyst: RAA |
| Bromodichloromethane               | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Bromoform                          | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Bromomethane                       | ND     | 0.54 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 2-Butanone                         | ND     | 1.8  |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Carbon disulfide                   | ND     | 1.8  |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Carbon tetrachloride               | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Chlorobenzene                      | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Chloroethane                       | ND     | 0.36 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Chloroform                         | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Chloromethane                      | ND     | 0.54 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 2-Chlorotoluene                    | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 4-Chlorotoluene                    | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| cis-1,2-DCE                        | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| cis-1,3-Dichloropropene            | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.36 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Dibromochloromethane               | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Dibromomethane                     | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 1,2-Dichlorobenzene                | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 1,3-Dichlorobenzene                | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 1,4-Dichlorobenzene                | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Dichlorodifluoromethane            | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 1,1-Dichloroethane                 | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 1,1-Dichloroethene                 | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 1,2-Dichloropropane                | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 1,3-Dichloropropane                | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 2,2-Dichloropropane                | ND     | 0.36 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 1,1-Dichloropropene                | ND     | 0.36 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Hexachlorobutadiene                | ND     | 0.36 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 2-Hexanone                         | ND     | 1.8  |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Isopropylbenzene                   | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 4-Isopropyltoluene                 | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 4-Methyl-2-pentanone               | ND     | 1.8  |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Methylene chloride                 | ND     | 0.54 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| n-Butylbenzene                     | 0.63   | 0.54 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| n-Propylbenzene                    | 0.99   | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| sec-Butylbenzene                   | 0.20   | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| Styrene                            | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| tert-Butylbenzene                  | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.18 |      | mg/Kg-dry | 5  | 9/20/2014 6:57:49 PM | R21355       |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (18-20')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 10:40:00 AM

**Lab ID:** 1409955-011

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch  |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |        |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.18   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Tetrachloroethene (PCE)            | ND     | 0.18   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| trans-1,2-DCE                      | ND     | 0.18   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| trans-1,3-Dichloropropene          | ND     | 0.18   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| 1,2,3-Trichlorobenzene             | ND     | 0.36   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| 1,2,4-Trichlorobenzene             | ND     | 0.18   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| 1,1,1-Trichloroethane              | ND     | 0.18   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| 1,1,2-Trichloroethane              | ND     | 0.18   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Trichloroethene (TCE)              | ND     | 0.18   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Trichlorofluoromethane             | ND     | 0.18   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| 1,2,3-Trichloropropane             | ND     | 0.36   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Vinyl chloride                     | ND     | 0.18   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Xylenes, Total                     | 1.1    | 0.36   |      | mg/Kg-dry           | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Surr: Dibromofluoromethane         | 88.7   | 70-130 |      | %REC                | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Surr: 1,2-Dichloroethane-d4        | 90.3   | 70-130 |      | %REC                | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Surr: Toluene-d8                   | 87.8   | 70-130 |      | %REC                | 5  | 9/20/2014 6:57:49 PM | R21355 |
| Surr: 4-Bromofluorobenzene         | 93.5   | 70-130 |      | %REC                | 5  | 9/20/2014 6:57:49 PM | R21355 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 56 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (20-22')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 10:50:00 AM

**Lab ID:** 1409955-012

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 1000   | 100      |      | mg/Kg-dry | 10 | 9/23/2014 1:28:09 PM  | 15397                |
| Motor Oil Range Organics (MRO)                 | ND     | 520      |      | mg/Kg-dry | 10 | 9/23/2014 1:28:09 PM  | 15397                |
| Surr: DNOP                                     | 0      | 57.9-140 | S    | %REC      | 10 | 9/23/2014 1:28:09 PM  | 15397                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | 470    | 36       |      | mg/Kg-dry | 10 | 9/27/2014 1:01:56 AM  | R21485               |
| Surr: BFB                                      | 336    | 80-120   | S    | %REC      | 10 | 9/27/2014 1:01:56 AM  | R21485               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 3.8    | 1.0      |      | wt%       | 1  | 9/19/2014 2:30:00 PM  | R21333               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | ND     | 0.035    |      | mg/Kg-dry | 1  | 9/26/2014 11:41:43 AM | 15505                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Arsenic                                        | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Barium                                         | 47     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Beryllium                                      | ND     | 0.15     |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Chromium                                       | 2.2    | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Cobalt                                         | 2.2    | 0.31     |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Lead                                           | 5.7    | 0.26     |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Nickel                                         | 2.4    | 0.51     |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Vanadium                                       | 12     | 2.6      |      | mg/Kg-dry | 1  | 10/1/2014 1:29:25 PM  | 15558                |
| Zinc                                           | 13     | 2.6      |      | mg/Kg-dry | 1  | 10/2/2014 12:37:38 PM | 15558                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |
| Acenaphthylene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |
| Aniline                                        | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |
| Anthracene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |
| Azobenzene                                     | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |
| Benz(a)anthracene                              | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |
| Benzo(a)pyrene                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |
| Benzo(b)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |
| Benzo(g,h,i)perylene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |
| Benzo(k)fluoranthene                           | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |
| Benzoic acid                                   | ND     | 0.52     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |
| Benzyl alcohol                                 | ND     | 0.21     |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM  | 15483                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-2 (20-22')

Project: GROUP 9

Collection Date: 9/18/2014 10:50:00 AM

Lab ID: 1409955-012

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL   | Qual | Units        | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|------|------|--------------|----|----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      | Analyst: JDC |    |                      |       |
| Bis(2-chloroethoxy)methane             | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Bis(2-chloroethyl)ether                | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Bis(2-chloroisopropyl)ether            | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 4-Bromophenyl phenyl ether             | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Butyl benzyl phthalate                 | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Carbazole                              | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 4-Chloro-3-methylphenol                | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 4-Chloroaniline                        | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 2-Chloronaphthalene                    | ND     | 0.26 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 2-Chlorophenol                         | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 4-Chlorophenyl phenyl ether            | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Chrysene                               | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Di-n-butyl phthalate                   | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Di-n-octyl phthalate                   | ND     | 0.42 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Dibenz(a,h)anthracene                  | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Dibenzofuran                           | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 1,2-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 1,3-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 1,4-Dichlorobenzene                    | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 3,3'-Dichlorobenzidine                 | ND     | 0.26 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Diethyl phthalate                      | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Dimethyl phthalate                     | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 2,4-Dichlorophenol                     | ND     | 0.42 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 2,4-Dimethylphenol                     | ND     | 0.31 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 2,4-Dinitrophenol                      | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 2,4-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 2,6-Dinitrotoluene                     | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Fluoranthene                           | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Fluorene                               | 0.43   | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Hexachlorobenzene                      | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Hexachlorobutadiene                    | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Hexachlorocyclopentadiene              | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Hexachloroethane                       | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.21 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| Isophorone                             | ND     | 0.52 |      | mg/Kg-dry    | 1  | 9/25/2014 6:40:29 PM | 15483 |
| 1-Methylnaphthalene                    | 8.4    | 1.0  |      | mg/Kg-dry    | 5  | 9/26/2014 6:30:06 PM | 15483 |
| 2-Methylnaphthalene                    | 14     | 1.0  |      | mg/Kg-dry    | 5  | 9/26/2014 6:30:06 PM | 15483 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (20-22')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 10:50:00 AM

**Lab ID:** 1409955-012

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC |
| 2-Methylphenol                         | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| 3+4-Methylphenol                       | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| N-Nitrosodi-n-propylamine              | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| N-Nitrosodiphenylamine                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Naphthalene                            | 5.6    | 1.0       |      | mg/Kg-dry | 5  | 9/26/2014 6:30:06 PM | 15483        |
| 2-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| 3-Nitroaniline                         | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| 4-Nitroaniline                         | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Nitrobenzene                           | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| 2-Nitrophenol                          | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| 4-Nitrophenol                          | ND     | 0.26      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Pentachlorophenol                      | ND     | 0.42      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Phenanthrene                           | 1.0    | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Phenol                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Pyrene                                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Pyridine                               | ND     | 0.52      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| 1,2,4-Trichlorobenzene                 | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| 2,4,5-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| 2,4,6-Trichlorophenol                  | ND     | 0.21      |      | mg/Kg-dry | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Surr: 2-Fluorophenol                   | 67.1   | 21-111    |      | %REC      | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Surr: Phenol-d5                        | 72.6   | 23.1-117  |      | %REC      | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Surr: 2,4,6-Tribromophenol             | 74.8   | 22.7-88.9 |      | %REC      | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Surr: Nitrobenzene-d5                  | 85.9   | 24.5-126  |      | %REC      | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Surr: 2-Fluorobiphenyl                 | 69.4   | 21.2-129  |      | %REC      | 1  | 9/25/2014 6:40:29 PM | 15483        |
| Surr: 4-Terphenyl-d14                  | 79.7   | 39.4-107  |      | %REC      | 1  | 9/25/2014 6:40:29 PM | 15483        |
| <b>EPA METHOD 8260B: VOLATILES</b>     |        |           |      |           |    |                      | Analyst: RAA |
| Benzene                                | 0.36   | 0.36      |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| Toluene                                | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| Ethylbenzene                           | 15     | 0.36      |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| 1,2,4-Trimethylbenzene                 | 25     | 0.36      |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| 1,3,5-Trimethylbenzene                 | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| 1,2-Dichloroethane (EDC)               | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| 1,2-Dibromoethane (EDB)                | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| Naphthalene                            | 7.8    | 0.72      |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| 1-Methylnaphthalene                    | 7.8    | 1.4       |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| 2-Methylnaphthalene                    | 15     | 1.4       |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| Acetone                                | ND     | 5.4       |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |
| Bromobenzene                           | ND     | 0.36      |      | mg/Kg-dry | 10 | 9/20/2014 7:25:46 PM | R21355       |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 14-2 (20-22')

**Project:** GROUP 9

**Collection Date:** 9/18/2014 10:50:00 AM

**Lab ID:** 1409955-012

**Matrix:** SOIL

**Received Date:** 9/19/2014 7:00:00 AM

| Analyses                           | Result | RL   | Qual | Units               | DF | Date Analyzed        | Batch  |
|------------------------------------|--------|------|------|---------------------|----|----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |      |      | Analyst: <b>RAA</b> |    |                      |        |
| Bromodichloromethane               | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Bromoform                          | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Bromomethane                       | ND     | 1.1  |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 2-Butanone                         | ND     | 3.6  |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Carbon disulfide                   | ND     | 3.6  |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Carbon tetrachloride               | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Chlorobenzene                      | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Chloroethane                       | ND     | 0.72 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Chloroform                         | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Chloromethane                      | ND     | 1.1  |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 2-Chlorotoluene                    | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 4-Chlorotoluene                    | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| cis-1,2-DCE                        | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| cis-1,3-Dichloropropene            | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,2-Dibromo-3-chloropropane        | ND     | 0.72 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Dibromochloromethane               | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Dibromomethane                     | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,2-Dichlorobenzene                | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,3-Dichlorobenzene                | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,4-Dichlorobenzene                | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Dichlorodifluoromethane            | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,1-Dichloroethane                 | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,1-Dichloroethene                 | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,2-Dichloropropane                | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,3-Dichloropropane                | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 2,2-Dichloropropane                | ND     | 0.72 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,1-Dichloropropene                | ND     | 0.72 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Hexachlorobutadiene                | ND     | 0.72 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 2-Hexanone                         | ND     | 3.6  |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Isopropylbenzene                   | 2.1    | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 4-Isopropyltoluene                 | 0.52   | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 4-Methyl-2-pentanone               | ND     | 3.6  |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Methylene chloride                 | ND     | 1.1  |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| n-Butylbenzene                     | 3.4    | 1.1  |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| n-Propylbenzene                    | 9.0    | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| sec-Butylbenzene                   | 1.3    | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Styrene                            | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| tert-Butylbenzene                  | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,1,1,2-Tetrachloroethane          | ND     | 0.36 |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1409955

Date Reported: 10/16/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 14-2 (20-22')

Project: GROUP 9

Collection Date: 9/18/2014 10:50:00 AM

Lab ID: 1409955-012

Matrix: SOIL

Received Date: 9/19/2014 7:00:00 AM

| Analyses                           | Result | RL     | Qual | Units               | DF | Date Analyzed        | Batch  |
|------------------------------------|--------|--------|------|---------------------|----|----------------------|--------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: <b>RAA</b> |    |                      |        |
| 1,1,2,2-Tetrachloroethane          | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Tetrachloroethene (PCE)            | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| trans-1,2-DCE                      | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| trans-1,3-Dichloropropene          | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,2,3-Trichlorobenzene             | ND     | 0.72   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,2,4-Trichlorobenzene             | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,1,1-Trichloroethane              | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,1,2-Trichloroethane              | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Trichloroethene (TCE)              | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Trichlorofluoromethane             | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| 1,2,3-Trichloropropane             | ND     | 0.72   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Vinyl chloride                     | ND     | 0.36   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Xylenes, Total                     | 4.7    | 0.72   |      | mg/Kg-dry           | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Surr: Dibromofluoromethane         | 87.3   | 70-130 |      | %REC                | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Surr: 1,2-Dichloroethane-d4        | 91.8   | 70-130 |      | %REC                | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Surr: Toluene-d8                   | 92.1   | 70-130 |      | %REC                | 10 | 9/20/2014 7:25:46 PM | R21355 |
| Surr: 4-Bromofluorobenzene         | 95.4   | 70-130 |      | %REC                | 10 | 9/20/2014 7:25:46 PM | R21355 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 61 of 82 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140923043  
**Project Name:** 1409955

## Analytical Results Report

|                         |                                  |                        |           |                           |                    |
|-------------------------|----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140923043-001                    | <b>Sampling Date</b>   | 9/17/2014 | <b>Date/Time Received</b> | 9/23/2014 11:40 AM |
| <b>Client Sample ID</b> | 1409955-001C / SWMU 14-5 (0-0.5) |                        |           | <b>Sampling Time</b>      | 10:00 AM           |
| <b>Matrix</b>           | Soil                             | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                  |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.265 | 9/30/2014     | CRW     | EPA 335.4 |           |
| %moisture | 6.3    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

|                         |                                 |                        |           |                           |                    |
|-------------------------|---------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140923043-002                   | <b>Sampling Date</b>   | 9/17/2014 | <b>Date/Time Received</b> | 9/23/2014 11:40 AM |
| <b>Client Sample ID</b> | 1409955-002C / SWMU 14-5 (0.5-2 |                        |           | <b>Sampling Time</b>      | 10:15 AM           |
| <b>Matrix</b>           | Soil                            | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                 |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.259 | 9/30/2014     | CRW     | EPA 335.4 |           |
| %moisture | 7.7    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

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ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140923043  
**Project Name:** 1409955

## Analytical Results Report

|                         |                                |                        |           |                           |                    |
|-------------------------|--------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140923043-003                  | <b>Sampling Date</b>   | 9/17/2014 | <b>Date/Time Received</b> | 9/23/2014 11:40 AM |
| <b>Client Sample ID</b> | 1409955-003C / SWMU 14-5 (16-1 |                        |           | <b>Sampling Time</b>      | 10:25 AM           |
| <b>Matrix</b>           | Soil                           | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.252 | 9/30/2014     | CRW     | EPA 335.4 |           |
| %moisture | 10.3   | Percent |       | 9/30/2014     | KJS     | %moisture |           |

|                         |                                |                        |           |                           |                    |
|-------------------------|--------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140923043-004                  | <b>Sampling Date</b>   | 9/17/2014 | <b>Date/Time Received</b> | 9/23/2014 11:40 AM |
| <b>Client Sample ID</b> | 1409955-004C / SWMU 14-5 (26-2 |                        |           | <b>Sampling Time</b>      | 10:30 AM           |
| <b>Matrix</b>           | Soil                           | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.228 | 9/30/2014     | CRW     | EPA 335.4 |           |
| %moisture | 3.9    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

|                         |                                  |                        |           |                           |                    |
|-------------------------|----------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140923043-005                    | <b>Sampling Date</b>   | 9/17/2014 | <b>Date/Time Received</b> | 9/23/2014 11:40 AM |
| <b>Client Sample ID</b> | 1409955-005C / SWMU 14-1 (0-0.5) |                        |           | <b>Sampling Time</b>      | 1:10 PM            |
| <b>Matrix</b>           | Soil                             | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                  |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.246 | 9/30/2014     | CRW     | EPA 335.4 |           |
| %moisture | 5.7    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

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**Attn:** ANDY FREEMAN

**Batch #:** 140923043  
**Project Name:** 1409955

## Analytical Results Report

|                         |                               |                        |           |                           |                    |
|-------------------------|-------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140923043-006                 | <b>Sampling Date</b>   | 9/17/2014 | <b>Date/Time Received</b> | 9/23/2014 11:40 AM |
| <b>Client Sample ID</b> | 1409955-006C / SWMU 14-1 (0-2 |                        |           | <b>Sampling Time</b>      | 1:15 PM            |
| <b>Matrix</b>           | Soil                          | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                               |                        |           |                           |                    |

| Parameter | Result | Units   | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.27 | 9/30/2014     | CRW     | EPA 335.4 |           |
| %moisture | 8.5    | Percent |      | 9/30/2014     | KJS     | %moisture |           |

|                         |                                 |                        |           |                           |                    |
|-------------------------|---------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140923043-007                   | <b>Sampling Date</b>   | 9/17/2014 | <b>Date/Time Received</b> | 9/23/2014 11:40 AM |
| <b>Client Sample ID</b> | 1409955-007C / SWMU 14-1 (8-10) |                        |           | <b>Sampling Time</b>      | 1:20 PM            |
| <b>Matrix</b>           | Soil                            | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                 |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.268 | 9/30/2014     | CRW     | EPA 335.4 |           |
| %moisture | 10.1   | Percent |       | 9/30/2014     | KJS     | %moisture |           |

|                         |                                |                        |           |                           |                    |
|-------------------------|--------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140923043-008                  | <b>Sampling Date</b>   | 9/17/2014 | <b>Date/Time Received</b> | 9/23/2014 11:40 AM |
| <b>Client Sample ID</b> | 1409955-008C / SWMU 14-1 (18-2 |                        |           | <b>Sampling Time</b>      | 1:30 PM            |
| <b>Matrix</b>           | Soil                           | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.252 | 9/30/2014     | CRW     | EPA 335.4 |           |
| %moisture | 2.6    | Percent |       | 9/30/2014     | KJS     | %moisture |           |

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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140923043  
**Project Name:** 1409955

## Analytical Results Report

|                  |                                  |                 |           |                    |           |           |           |
|------------------|----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140923043-009                    | Sampling Date   | 9/17/2014 | Date/Time Received | 9/23/2014 | 11:40 AM  |           |
| Client Sample ID | 1409955-009C / SWMU 14-2 (0-0.5) |                 |           | Sampling Time      | 3:40 PM   |           |           |
| Matrix           | Soil                             | Sample Location |           |                    |           |           |           |
| Comments         |                                  |                 |           |                    |           |           |           |
|                  |                                  |                 |           |                    |           |           |           |
| Parameter        | Result                           | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                               | mg/Kg           | 0.27      | 9/30/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 7.9                              | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

|                  |                                  |                 |           |                    |           |           |           |
|------------------|----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140923043-010                    | Sampling Date   | 9/17/2014 | Date/Time Received | 9/23/2014 | 11:40 AM  |           |
| Client Sample ID | 1409955-010C / SWMU 14-2 (0.5-2) |                 |           | Sampling Time      | 3:50 PM   |           |           |
| Matrix           | Soil                             | Sample Location |           |                    |           |           |           |
| Comments         |                                  |                 |           |                    |           |           |           |
|                  |                                  |                 |           |                    |           |           |           |
| Parameter        | Result                           | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                               | mg/Kg           | 0.265     | 9/30/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 7.3                              | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

|                  |                                |                 |           |                    |           |           |           |
|------------------|--------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 140923043-011                  | Sampling Date   | 9/18/2014 | Date/Time Received | 9/23/2014 | 11:40 AM  |           |
| Client Sample ID | 1409955-011C / SWMU 14-2 (18-2 |                 |           | Sampling Time      | 10:40 AM  |           |           |
| Matrix           | Soil                           | Sample Location |           |                    |           |           |           |
| Comments         |                                |                 |           |                    |           |           |           |
|                  |                                |                 |           |                    |           |           |           |
| Parameter        | Result                         | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                             | mg/Kg           | 0.223     | 9/30/2014          | CRW       | EPA 335.4 |           |
| %moisture        | 3.6                            | Percent         |           | 9/30/2014          | KJS       | %moisture |           |

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:Cert0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099



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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

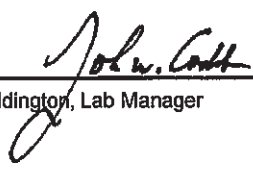
**Batch #:** 140923043  
**Project Name:** 1409955

## Analytical Results Report

|                         |                                |                        |           |                           |                    |
|-------------------------|--------------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140923043-012                  | <b>Sampling Date</b>   | 9/18/2014 | <b>Date/Time Received</b> | 9/23/2014 11:40 AM |
| <b>Client Sample ID</b> | 1409955-012C / SWMU 14-2 (20-2 | <b>Sampling Time</b>   | 10:50 AM  |                           |                    |
| <b>Matrix</b>           | Soil                           | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                                |                        |           |                           |                    |

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.241 | 9/30/2014     | CRW     | EPA 335.4 |           |
| %moisture | 4      | Percent |       | 9/30/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level  
ND Not Detected  
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.  
The results reported relate only to the samples indicated.  
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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**Attn:** ANDY FREEMAN

**Batch #:** 140923043  
**Project Name:** 1409955

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|---------|-----------|---------------|
| Cyanide   | 0.496      | mg/kg | 0.5       | 99.2 | 90-110  | 9/30/2014 | 9/30/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|------|---------|-----------|---------------|
| 140923043-012 | Cyanide   | ND            | 11.6      | mg/kg | 12.1     | 95.9 | 90-110  | 9/30/2014 | 9/30/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 11.9       | mg/kg | 12.1      | 98.3 | 2.6  | 0-25    | 9/30/2014 | 9/30/2014     |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date | Analysis Date |
|-----------|--------|-------|-----|-----------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 9/30/2014 | 9/30/2014     |

AR Acceptable Range  
ND Not Detected  
PQL Practical Quantitation Limit  
RPD Relative Percentage Difference

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C586; MT:Cert0085; FL(NELAP): E871099

Tuesday, October 07, 2014

Page 1 of 1

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |     |                          |             |                                                   |          |              |      |          |      |
|--------------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | MB-15397  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                     | PBS       |     | Batch ID: 15397          |             | RunNo: 21309                                      |          |              |      |          |      |
| Prep Date:                     | 9/19/2014 |     | Analysis Date: 9/19/2014 |             | SeqNo: 622102                                     |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10  |                          |             |                                                   |          |              |      |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50  |                          |             |                                                   |          |              |      |          |      |
| Surr: DNOP                     | 8.6       |     | 10.00                    |             | 86.2                                              | 57.9     | 140          |      |          |      |

|                             |           |     |                          |             |                                                   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15397 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 15397          |             | RunNo: 21309                                      |          |              |      |          |      |
| Prep Date:                  | 9/19/2014 |     | Analysis Date: 9/19/2014 |             | SeqNo: 622103                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 48        | 10  | 50.00                    | 0           | 95.9                                              | 68.6     | 130          |      |          |      |
| Surr: DNOP                  | 4.3       |     | 5.000                    |             | 85.6                                              | 57.9     | 140          |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID <b>5ML RB</b>       | SampType: <b>MBLK</b>           |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21374</b>         |     |           | RunNo: <b>21374</b>                               |      |                     |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/23/2014</b> |     |           | SeqNo: <b>624891</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |                                                   |      |                     |           |      |          |      |
| Surr: BFB                     | 930                             |     | 1000      |                                                   | 92.9 | 80                  | 120       |      |          |      |

| Sample ID <b>2.5UG GRO LCS</b> | SampType: <b>LCS</b>            |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
|--------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>         | Batch ID: <b>R21374</b>         |     |           | RunNo: <b>21374</b>                               |      |                     |           |      |          |      |
| Prep Date:                     | Analysis Date: <b>9/23/2014</b> |     |           | SeqNo: <b>624906</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                        | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)  | 22                              | 5.0 | 25.00     | 0                                                 | 89.6 | 65.8                | 139       |      |          |      |
| Surr: BFB                      | 840                             |     | 1000      |                                                   | 84.4 | 80                  | 120       |      |          |      |

| Sample ID <b>MB-15490 MK</b>  | SampType: <b>MBLK</b>           |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21449</b>         |     |           | RunNo: <b>21449</b>                               |      |                     |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/25/2014</b> |     |           | SeqNo: <b>627596</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |                                                   |      |                     |           |      |          |      |
| Surr: BFB                     | 880                             |     | 1000      |                                                   | 87.7 | 80                  | 120       |      |          |      |

| Sample ID <b>LCS-15490 MK</b> | SampType: <b>LCS</b>            |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>        | Batch ID: <b>R21449</b>         |     |           | RunNo: <b>21449</b>                               |      |                     |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/25/2014</b> |     |           | SeqNo: <b>627597</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 29                              | 5.0 | 25.00     | 0                                                 | 116  | 65.8                | 139       |      |          |      |
| Surr: BFB                     | 980                             |     | 1000      |                                                   | 98.0 | 80                  | 120       |      |          |      |

| Sample ID <b>MB-15512 MK</b>  | SampType: <b>MBLK</b>           |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21485</b>         |     |           | RunNo: <b>21485</b>                               |      |                     |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/26/2014</b> |     |           | SeqNo: <b>628724</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |           |                                                   |      |                     |           |      |          |      |
| Surr: BFB                     | 880                             |     | 1000      |                                                   | 87.5 | 80                  | 120       |      |          |      |

| Sample ID <b>LCS-15512 MK</b> | SampType: <b>LCS</b>            |     |           | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |      |                     |           |      |          |      |
|-------------------------------|---------------------------------|-----|-----------|---------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>        | Batch ID: <b>R21485</b>         |     |           | RunNo: <b>21485</b>                               |      |                     |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>9/26/2014</b> |     |           | SeqNo: <b>628725</b>                              |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value | SPK Ref Val                                       | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                               |              |     |                          |             |      |                                            |           |              |          |      |
|-------------------------------|--------------|-----|--------------------------|-------------|------|--------------------------------------------|-----------|--------------|----------|------|
| Sample ID                     | LCS-15512 MK |     | SampType: LCS            |             |      | TestCode: EPA Method 8015D: Gasoline Range |           |              |          |      |
| Client ID:                    | LCSS         |     | Batch ID: R21485         |             |      | RunNo: 21485                               |           |              |          |      |
| Prep Date:                    |              |     | Analysis Date: 9/26/2014 |             |      | SeqNo: 628725                              |           | Units: mg/Kg |          |      |
| Analyte                       | Result       | PQL | SPK value                | SPK Ref Val | %REC | LowLimit                                   | HighLimit | %RPD         | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 27           | 5.0 | 25.00                    | 0           | 106  | 65.8                                       | 139       |              |          |      |
| Surr: BFB                     | 970          |     | 1000                     |             | 96.6 | 80                                         | 120       |              |          |      |

### Qualifiers:

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E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |        |                          |           |             |                                       |          |              |      |          |      |
|--------------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | 5mL-rb | SampType: MBLK           |           |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                     | PBS    | Batch ID: R21325         |           |             | RunNo: 21325                          |          |              |      |          |      |
| Prep Date:                     |        | Analysis Date: 9/19/2014 |           |             | SeqNo: 622356                         |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Toluene                        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Ethylbenzene                   | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Naphthalene                    | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| 1-Methylnaphthalene            | ND     | 0.20                     |           |             |                                       |          |              |      |          |      |
| 2-Methylnaphthalene            | ND     | 0.20                     |           |             |                                       |          |              |      |          |      |
| Acetone                        | ND     | 0.75                     |           |             |                                       |          |              |      |          |      |
| Bromobenzene                   | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromodichloromethane           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromoform                      | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromomethane                   | ND     | 0.15                     |           |             |                                       |          |              |      |          |      |
| 2-Butanone                     | ND     | 0.50                     |           |             |                                       |          |              |      |          |      |
| Carbon disulfide               | ND     | 0.50                     |           |             |                                       |          |              |      |          |      |
| Carbon tetrachloride           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chlorobenzene                  | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chloroethane                   | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| Chloroform                     | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chloromethane                  | ND     | 0.15                     |           |             |                                       |          |              |      |          |      |
| 2-Chlorotoluene                | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 4-Chlorotoluene                | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| cis-1,2-DCE                    | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| Dibromochloromethane           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Dibromomethane                 | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Dichlorodifluoromethane        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethane             | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,1-Dichloroethene             | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dichloropropane            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,3-Dichloropropane            | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 2,2-Dichloropropane            | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
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O RSD is greater than RSDlimit  
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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |                |           |             |                             |          |           |      |          |      |
|-----------------------------|--------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                   | 5mL-rb | SampType:      | MBLK      | TestCode:   | EPA Method 8260B: Volatiles |          |           |      |          |      |
| Client ID:                  | PBS    | Batch ID:      | R21325    | RunNo:      | 21325                       |          |           |      |          |      |
| Prep Date:                  |        | Analysis Date: | 9/19/2014 | SeqNo:      | 622356                      | Units:   | mg/Kg     |      |          |      |
| Analyte                     | Result | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1-Dichloropropene         | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Hexachlorobutadiene         | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| 2-Hexanone                  | ND     | 0.50           |           |             |                             |          |           |      |          |      |
| Isopropylbenzene            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 4-Isopropyltoluene          | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 4-Methyl-2-pentanone        | ND     | 0.50           |           |             |                             |          |           |      |          |      |
| Methylene chloride          | ND     | 0.15           |           |             |                             |          |           |      |          |      |
| n-Butylbenzene              | ND     | 0.15           |           |             |                             |          |           |      |          |      |
| n-Propylbenzene             | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| sec-Butylbenzene            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Styrene                     | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| tert-Butylbenzene           | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Tetrachloroethene (PCE)     | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| trans-1,2-DCE               | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| trans-1,3-Dichloropropene   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichlorobenzene      | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| 1,2,4-Trichlorobenzene      | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,1-Trichloroethane       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,2-Trichloroethane       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Trichloroethene (TCE)       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Trichlorofluoromethane      | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichloropropane      | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Vinyl chloride              | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Xylenes, Total              | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| mp-Xylenes                  | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| o-Xylene                    | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Surr: Dibromofluoromethane  | 0.44   |                | 0.5000    |             | 87.9                        | 70       | 130       |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.42   |                | 0.5000    |             | 84.6                        | 70       | 130       |      |          |      |
| Surr: Toluene-d8            | 0.45   |                | 0.5000    |             | 90.2                        | 70       | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.46   |                | 0.5000    |             | 92.4                        | 70       | 130       |      |          |      |

|            |                   |                |           |             |                             |          |           |      |          |      |
|------------|-------------------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID  | 100nglcs200nganne | SampType:      | LCS       | TestCode:   | EPA Method 8260B: Volatiles |          |           |      |          |      |
| Client ID: | LCSS              | Batch ID:      | R21325    | RunNo:      | 21325                       |          |           |      |          |      |
| Prep Date: |                   | Analysis Date: | 9/19/2014 | SeqNo:      | 622357                      | Units:   | mg/Kg     |      |          |      |
| Analyte    | Result            | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene    | 0.90              | 0.050          | 1.000     | 0           | 90.3                        | 70       | 130       |      |          |      |

### Qualifiers:

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S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                   |       |                          |               |                                       |          |              |      |          |      |
|-----------------------------|-------------------|-------|--------------------------|---------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | 100nglcs200nganne |       |                          | SampType: LCS | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                  | LCSS              |       | Batch ID: R21325         |               | RunNo: 21325                          |          |              |      |          |      |
| Prep Date:                  |                   |       | Analysis Date: 9/19/2014 |               | SeqNo: 622357                         |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result            | PQL   | SPK value                | SPK Ref Val   | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Toluene                     | 0.99              | 0.050 | 1.000                    | 0             | 99.0                                  | 70       | 130          |      |          |      |
| Chlorobenzene               | 0.98              | 0.050 | 1.000                    | 0             | 98.2                                  | 70       | 130          |      |          |      |
| 1,1-Dichloroethene          | 0.98              | 0.050 | 1.000                    | 0             | 97.6                                  | 60.5     | 160          |      |          |      |
| Trichloroethene (TCE)       | 0.91              | 0.050 | 1.000                    | 0             | 91.2                                  | 58.8     | 139          |      |          |      |
| Surr: Dibromofluoromethane  | 0.48              |       | 0.5000                   |               | 96.6                                  | 70       | 130          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.45              |       | 0.5000                   |               | 90.8                                  | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.45              |       | 0.5000                   |               | 90.4                                  | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.43              |       | 0.5000                   |               | 85.9                                  | 70       | 130          |      |          |      |

|                                |        |                          |           |             |                                       |          |              |      |          |      |
|--------------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | 5ml-rb | SampType: MBLK           |           |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                     | PBS    | Batch ID: R21355         |           |             | RunNo: 21355                          |          |              |      |          |      |
| Prep Date:                     |        | Analysis Date: 9/20/2014 |           |             | SeqNo: 623733                         |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Toluene                        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Ethylbenzene                   | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Naphthalene                    | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| 1-Methylnaphthalene            | ND     | 0.20                     |           |             |                                       |          |              |      |          |      |
| 2-Methylnaphthalene            | ND     | 0.20                     |           |             |                                       |          |              |      |          |      |
| Acetone                        | ND     | 0.75                     |           |             |                                       |          |              |      |          |      |
| Bromobenzene                   | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromodichloromethane           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromoform                      | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Bromomethane                   | ND     | 0.15                     |           |             |                                       |          |              |      |          |      |
| 2-Butanone                     | ND     | 0.50                     |           |             |                                       |          |              |      |          |      |
| Carbon disulfide               | ND     | 0.50                     |           |             |                                       |          |              |      |          |      |
| Carbon tetrachloride           | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chlorobenzene                  | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chloroethane                   | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| Chloroform                     | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| Chloromethane                  | ND     | 0.15                     |           |             |                                       |          |              |      |          |      |
| 2-Chlorotoluene                | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |
| 4-Chlorotoluene                | ND     | 0.050                    |           |             |                                       |          |              |      |          |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
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- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |                |           |             |                             |          |           |      |          |      |
|-----------------------------|--------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                   | 5ml-rb | SampType:      | MBLK      | TestCode:   | EPA Method 8260B: Volatiles |          |           |      |          |      |
| Client ID:                  | PBS    | Batch ID:      | R21355    | RunNo:      | 21355                       |          |           |      |          |      |
| Prep Date:                  |        | Analysis Date: | 9/20/2014 | SeqNo:      | 623733                      | Units:   | mg/Kg     |      |          |      |
| Analyte                     | Result | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| cis-1,2-DCE                 | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| cis-1,3-Dichloropropene     | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dibromo-3-chloropropane | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Dibromochloromethane        | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Dibromomethane              | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dichlorobenzene         | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,3-Dichlorobenzene         | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,4-Dichlorobenzene         | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Dichlorodifluoromethane     | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1-Dichloroethane          | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1-Dichloroethene          | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2-Dichloropropane         | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,3-Dichloropropane         | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 2,2-Dichloropropane         | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| 1,1-Dichloropropene         | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Hexachlorobutadiene         | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| 2-Hexanone                  | ND     | 0.50           |           |             |                             |          |           |      |          |      |
| Isopropylbenzene            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 4-Isopropyltoluene          | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 4-Methyl-2-pentanone        | ND     | 0.50           |           |             |                             |          |           |      |          |      |
| Methylene chloride          | ND     | 0.15           |           |             |                             |          |           |      |          |      |
| n-Butylbenzene              | ND     | 0.15           |           |             |                             |          |           |      |          |      |
| n-Propylbenzene             | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| sec-Butylbenzene            | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Styrene                     | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| tert-Butylbenzene           | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Tetrachloroethene (PCE)     | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| trans-1,2-DCE               | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| trans-1,3-Dichloropropene   | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichlorobenzene      | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| 1,2,4-Trichlorobenzene      | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,1-Trichloroethane       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,1,2-Trichloroethane       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Trichloroethene (TCE)       | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| Trichlorofluoromethane      | ND     | 0.050          |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichloropropane      | ND     | 0.10           |           |             |                             |          |           |      |          |      |
| Vinyl chloride              | ND     | 0.050          |           |             |                             |          |           |      |          |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
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- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |                          |           |             |                                       |          |              |      |          |      |
|-----------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | 5ml-rb | SampType: MBLK           |           |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                  | PBS    | Batch ID: R21355         |           |             | RunNo: 21355                          |          |              |      |          |      |
| Prep Date:                  |        | Analysis Date: 9/20/2014 |           |             | SeqNo: 623733                         |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Xylenes, Total              | ND     | 0.10                     |           |             |                                       |          |              |      |          |      |
| Surr: Dibromofluoromethane  | 0.48   |                          | 0.5000    |             | 96.7                                  | 70       | 130          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.47   |                          | 0.5000    |             | 93.2                                  | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.47   |                          | 0.5000    |             | 94.6                                  | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.47   |                          | 0.5000    |             | 93.9                                  | 70       | 130          |      |          |      |

|                             |           |       |                          |             |                                       |          |              |      |          |      |
|-----------------------------|-----------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | 100ng lcs |       | SampType: LCS            |             | TestCode: EPA Method 8260B: Volatiles |          |              |      |          |      |
| Client ID:                  | LCSS      |       | Batch ID: R21355         |             | RunNo: 21355                          |          |              |      |          |      |
| Prep Date:                  |           |       | Analysis Date: 9/20/2014 |             | SeqNo: 623743                         |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL   | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                     | 1.1       | 0.050 | 1.000                    | 0           | 105                                   | 70       | 130          |      |          |      |
| Toluene                     | 1.2       | 0.050 | 1.000                    | 0           | 118                                   | 70       | 130          |      |          |      |
| Chlorobenzene               | 1.1       | 0.050 | 1.000                    | 0           | 110                                   | 70       | 130          |      |          |      |
| 1,1-Dichloroethene          | 1.2       | 0.050 | 1.000                    | 0           | 115                                   | 60.5     | 160          |      |          |      |
| Trichloroethene (TCE)       | 0.94      | 0.050 | 1.000                    | 0           | 93.8                                  | 58.8     | 139          |      |          |      |
| Surr: Dibromofluoromethane  | 0.50      |       | 0.5000                   |             | 101                                   | 70       | 130          |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.47      |       | 0.5000                   |             | 93.5                                  | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.50      |       | 0.5000                   |             | 101                                   | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.45      |       | 0.5000                   |             | 89.6                                  | 70       | 130          |      |          |      |

### Qualifiers:

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S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |         |                          |             |                                           |          |              |      |          |      |
|--------------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15407  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                     | PBS       |         | Batch ID: 15407          |             | RunNo: 21329                              |          |              |      |          |      |
| Prep Date:                     | 9/19/2014 |         | Analysis Date: 9/19/2014 |             | SeqNo: 622721                             |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Toluene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Xylenes, Total                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| Acetone                        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromoform                      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromomethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroform                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloromethane                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
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J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15407  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | PBS       |         | Batch ID: 15407          |             | RunNo: 21329                              |          |              |      |          |      |
| Prep Date:                  | 9/19/2014 |         | Analysis Date: 9/19/2014 |             | SeqNo: 622721                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 2,2-Dichloropropane         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloropropene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Hexachlorobutadiene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Isopropylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Isopropyltoluene          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methylene chloride          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| n-Butylbenzene              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Hexanone                  | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| n-Propylbenzene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| sec-Butylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Styrene                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Methyl-2-pentanone        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| tert-Butylbenzene           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Tetrachloroethene (PCE)     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,2-DCE               | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,3-Dichloropropene   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichloroethene (TCE)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichlorofluoromethane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichloropropane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Vinyl chloride              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0210    |         | 0.02000                  |             | 105                                       | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0234    |         | 0.02000                  |             | 117                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0202    |         | 0.02000                  |             | 101                                       | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0205    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |

|               |           |         |                          |             |                                           |          |              |      |          |      |
|---------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID     | ics-15407 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:    | LCSS      |         | Batch ID: 15407          |             | RunNo: 21329                              |          |              |      |          |      |
| Prep Date:    | 9/19/2014 |         | Analysis Date: 9/19/2014 |             | SeqNo: 622723                             |          | Units: mg/Kg |      |          |      |
| Analyte       | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene       | 0.00949   | 0.00200 | 0.01000                  | 0           | 94.9                                      | 70       | 130          |      |          |      |
| Toluene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Chlorobenzene | 0.0100    | 0.00200 | 0.01000                  | 0           | 100                                       | 70       | 130          |      |          |      |

### Qualifiers:

|   |                                                 |    |                                                    |
|---|-------------------------------------------------|----|----------------------------------------------------|
| * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
| E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
| O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
| R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
| S | Spike Recovery outside accepted recovery limits |    |                                                    |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |         |                                 |             |                                                  |          |                     |      |          |      |
|-----------------------------|------------------|---------|---------------------------------|-------------|--------------------------------------------------|----------|---------------------|------|----------|------|
| Sample ID                   | <b>Ics-15407</b> |         | SampType: <b>LCS</b>            |             | TestCode: <b>Method 8260B/5035LOW: VOLATILES</b> |          |                     |      |          |      |
| Client ID:                  | <b>LCSS</b>      |         | Batch ID: <b>15407</b>          |             | RunNo: <b>21329</b>                              |          |                     |      |          |      |
| Prep Date:                  | <b>9/19/2014</b> |         | Analysis Date: <b>9/19/2014</b> |             | SeqNo: <b>622723</b>                             |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                     | Result           | PQL     | SPK value                       | SPK Ref Val | %REC                                             | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.00863          | 0.00200 | 0.01000                         | 0           | 86.3                                             | 70       | 130                 |      |          |      |
| Trichloroethene (TCE)       | 0.00883          | 0.00200 | 0.01000                         | 0           | 88.3                                             | 61.6     | 131                 |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0200           |         | 0.02000                         |             | 100                                              | 70       | 130                 |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0221           |         | 0.02000                         |             | 110                                              | 65.3     | 135                 |      |          |      |
| Surr: Dibromofluoromethane  | 0.0179           |         | 0.02000                         |             | 89.3                                             | 70       | 130                 |      |          |      |
| Surr: Toluene-d8            | 0.0204           |         | 0.02000                         |             | 102                                              | 70       | 130                 |      |          |      |

|                             |                           |         |                                 |             |                                                  |          |                         |      |          |      |
|-----------------------------|---------------------------|---------|---------------------------------|-------------|--------------------------------------------------|----------|-------------------------|------|----------|------|
| Sample ID                   | <b>1409955-001ams</b>     |         | SampType: <b>MS</b>             |             | TestCode: <b>Method 8260B/5035LOW: VOLATILES</b> |          |                         |      |          |      |
| Client ID:                  | <b>SWMU 14-5 (0-0.5')</b> |         | Batch ID: <b>15407</b>          |             | RunNo: <b>21329</b>                              |          |                         |      |          |      |
| Prep Date:                  | <b>9/19/2014</b>          |         | Analysis Date: <b>9/19/2014</b> |             | SeqNo: <b>622725</b>                             |          | Units: <b>mg/Kg-dry</b> |      |          |      |
| Analyte                     | Result                    | PQL     | SPK value                       | SPK Ref Val | %REC                                             | LowLimit | HighLimit               | %RPD | RPDLimit | Qual |
| Benzene                     | 0.00588                   | 0.00137 | 0.006830                        | 0           | 86.0                                             | 70       | 130                     |      |          |      |
| Toluene                     | 0.00597                   | 0.00137 | 0.006830                        | 0           | 87.4                                             | 70       | 130                     |      |          |      |
| Chlorobenzene               | 0.00604                   | 0.00137 | 0.006830                        | 0           | 88.4                                             | 70       | 130                     |      |          |      |
| 1,1-Dichloroethene          | 0.00550                   | 0.00137 | 0.006830                        | 0           | 80.5                                             | 70       | 130                     |      |          |      |
| Trichloroethene (TCE)       | 0.00570                   | 0.00137 | 0.006830                        | 0           | 83.5                                             | 70       | 130                     |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0147                    |         | 0.01366                         |             | 107                                              | 70       | 130                     |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0155                    |         | 0.01366                         |             | 113                                              | 65.3     | 135                     |      |          |      |
| Surr: Dibromofluoromethane  | 0.0127                    |         | 0.01366                         |             | 92.8                                             | 70       | 130                     |      |          |      |
| Surr: Toluene-d8            | 0.0139                    |         | 0.01366                         |             | 102                                              | 70       | 130                     |      |          |      |

|                             |                           |         |                                 |             |                                                  |          |                         |      |          |      |
|-----------------------------|---------------------------|---------|---------------------------------|-------------|--------------------------------------------------|----------|-------------------------|------|----------|------|
| Sample ID                   | <b>1409955-001amsd</b>    |         | SampType: <b>MSD</b>            |             | TestCode: <b>Method 8260B/5035LOW: VOLATILES</b> |          |                         |      |          |      |
| Client ID:                  | <b>SWMU 14-5 (0-0.5')</b> |         | Batch ID: <b>15407</b>          |             | RunNo: <b>21329</b>                              |          |                         |      |          |      |
| Prep Date:                  | <b>9/19/2014</b>          |         | Analysis Date: <b>9/19/2014</b> |             | SeqNo: <b>622726</b>                             |          | Units: <b>mg/Kg-dry</b> |      |          |      |
| Analyte                     | Result                    | PQL     | SPK value                       | SPK Ref Val | %REC                                             | LowLimit | HighLimit               | %RPD | RPDLimit | Qual |
| Benzene                     | 0.00554                   | 0.00137 | 0.006830                        | 0           | 81.1                                             | 70       | 130                     | 5.90 | 20       |      |
| Toluene                     | 0.00577                   | 0.00137 | 0.006830                        | 0           | 84.5                                             | 70       | 130                     | 3.39 | 20       |      |
| Chlorobenzene               | 0.00572                   | 0.00137 | 0.006830                        | 0           | 83.8                                             | 70       | 130                     | 5.32 | 20       |      |
| 1,1-Dichloroethene          | 0.00523                   | 0.00137 | 0.006830                        | 0           | 76.6                                             | 70       | 130                     | 5.05 | 20       |      |
| Trichloroethene (TCE)       | 0.00551                   | 0.00137 | 0.006830                        | 0           | 80.7                                             | 70       | 130                     | 3.39 | 20       |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0147                    |         | 0.01366                         |             | 108                                              | 70       | 130                     | 0    | 0        |      |
| Surr: 4-Bromofluorobenzene  | 0.0160                    |         | 0.01366                         |             | 117                                              | 65.3     | 135                     | 0    | 0        |      |
| Surr: Dibromofluoromethane  | 0.0127                    |         | 0.01366                         |             | 92.7                                             | 70       | 130                     | 0    | 0        |      |
| Surr: Toluene-d8            | 0.0135                    |         | 0.01366                         |             | 98.7                                             | 70       | 130                     | 0    | 0        |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15394  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15394          |             | RunNo: 21349                              |          |              |      |          |      |
| Prep Date:                  | 9/19/2014 |      | Analysis Date: 9/22/2014 |             | SeqNo: 623395                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Carbazole                   | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 4-Chloroaniline             | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorophenol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Chrysene                    | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dibenzofuran                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25 |                          |             |                                           |          |              |      |          |      |
| Diethyl phthalate           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Dimethyl phthalate          | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30 |                          |             |                                           |          |              |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15394  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 15394     | RunNo:      | 21349                           |          |           |      |          |      |
| Prep Date:                 | 9/19/2014 | Analysis Date: | 9/22/2014 | SeqNo:      | 623395                          | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 2.6       |                | 3.330     |             | 77.5                            | 21       | 111       |      |          |      |
| Surr: Phenol-d5            | 2.7       |                | 3.330     |             | 82.5                            | 23.1     | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol | 2.6       |                | 3.330     |             | 77.4                            | 22.7     | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5      | 1.4       |                | 1.670     |             | 85.6                            | 24.5     | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |                | 1.670     |             | 78.5                            | 21.2     | 129       |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.5       |                | 1.670     |             | 90.3                            | 39.4     | 107       |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                            |           |      |                          |             |                                           |          |              |      |          |      |
|----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                  | lcs-15394 |      | SampType: LCS            |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15394          |             | RunNo: 21349                              |          |              |      |          |      |
| Prep Date:                 | 9/19/2014 |      | Analysis Date: 9/22/2014 |             | SeqNo: 623403                             |          | Units: mg/Kg |      |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene               | 1.3       | 0.20 | 1.670                    | 0           | 76.5                                      | 50.7     | 110          |      |          |      |
| 4-Chloro-3-methylphenol    | 3.1       | 0.50 | 3.330                    | 0           | 92.3                                      | 47.8     | 107          |      |          |      |
| 2-Chlorophenol             | 2.6       | 0.20 | 3.330                    | 0           | 78.5                                      | 45.7     | 108          |      |          |      |
| 1,4-Dichlorobenzene        | 1.1       | 0.20 | 1.670                    | 0           | 68.8                                      | 46.1     | 112          |      |          |      |
| 2,4-Dinitrotoluene         | 1.2       | 0.50 | 1.670                    | 0           | 69.4                                      | 44.9     | 114          |      |          |      |
| N-Nitrosodi-n-propylamine  | 1.0       | 0.20 | 1.670                    | 0           | 60.9                                      | 38.7     | 128          |      |          |      |
| 4-Nitrophenol              | 2.8       | 0.25 | 3.330                    | 0           | 84.9                                      | 40.2     | 103          |      |          |      |
| Pentachlorophenol          | 2.2       | 0.40 | 3.330                    | 0           | 65.1                                      | 32.9     | 94           |      |          |      |
| Phenol                     | 2.8       | 0.20 | 3.330                    | 0           | 84.7                                      | 44.1     | 109          |      |          |      |
| Pyrene                     | 1.4       | 0.20 | 1.670                    | 0           | 85.2                                      | 51.9     | 109          |      |          |      |
| 1,2,4-Trichlorobenzene     | 1.3       | 0.20 | 1.670                    | 0           | 76.1                                      | 49.5     | 115          |      |          |      |
| Surr: 2-Fluorophenol       | 2.3       |      | 3.330                    |             | 69.1                                      | 21       | 111          |      |          |      |
| Surr: Phenol-d5            | 2.7       |      | 3.330                    |             | 80.0                                      | 23.1     | 117          |      |          |      |
| Surr: 2,4,6-Tribromophenol | 2.7       |      | 3.330                    |             | 80.7                                      | 22.7     | 88.9         |      |          |      |
| Surr: Nitrobenzene-d5      | 1.4       |      | 1.670                    |             | 81.9                                      | 24.5     | 126          |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3       |      | 1.670                    |             | 79.3                                      | 21.2     | 129          |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.5       |      | 1.670                    |             | 92.7                                      | 39.4     | 107          |      |          |      |

|                             |           |      |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15483  |      | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                  | PBS       |      | Batch ID: 15483          |             | RunNo: 21456                              |          |              |      |          |      |
| Prep Date:                  | 9/24/2014 |      | Analysis Date: 9/25/2014 |             | SeqNo: 627716                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Acenaphthylene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Aniline                     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Anthracene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Azobenzene                  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benz(a)anthracene           | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(a)pyrene              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(b)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzo(k)fluoranthene        | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Benzoic acid                | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |
| Benzyl alcohol              | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 0.20 |                          |             |                                           |          |              |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 0.50 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

- |                                                   |                                                      |
|---------------------------------------------------|------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |                                                      |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |                |           |             |                                 |          |           |      |          |      |
|-----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                   | mb-15483  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                  | PBS       | Batch ID:      | 15483     | RunNo:      | 21456                           |          |           |      |          |      |
| Prep Date:                  | 9/24/2014 | Analysis Date: | 9/25/2014 | SeqNo:      | 627716                          | Units:   | mg/Kg     |      |          |      |
| Analyte                     | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 4-Bromophenyl phenyl ether  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Butyl benzyl phthalate      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Carbazole                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 4-Chloroaniline             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Chloronaphthalene         | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| 2-Chlorophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Chrysene                    | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Di-n-butyl phthalate        | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Di-n-octyl phthalate        | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Dibenzofuran                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Diethyl phthalate           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Dimethyl phthalate          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4-Dichlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| 2,4-Dimethylphenol          | ND        | 0.30           |           |             |                                 |          |           |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,4-Dinitrophenol           | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,4-Dinitrotoluene          | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene          | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                    | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane            | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                  | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene         | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol              | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol            | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID <b>mb-15483</b>   | SampType: <b>MBLK</b>           |      |           | TestCode: <b>EPA Method 8270C: Semivolatiles</b> |      |                     |           |      |          |      |
|-----------------------------|---------------------------------|------|-----------|--------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: <b>PBS</b>       | Batch ID: <b>15483</b>          |      |           | RunNo: <b>21456</b>                              |      |                     |           |      |          |      |
| Prep Date: <b>9/24/2014</b> | Analysis Date: <b>9/25/2014</b> |      |           | SeqNo: <b>627716</b>                             |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                     | Result                          | PQL  | SPK value | SPK Ref Val                                      | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Naphthalene                 | ND                              | 0.20 |           |                                                  |      |                     |           |      |          |      |
| 2-Nitroaniline              | ND                              | 0.20 |           |                                                  |      |                     |           |      |          |      |
| 3-Nitroaniline              | ND                              | 0.20 |           |                                                  |      |                     |           |      |          |      |
| 4-Nitroaniline              | ND                              | 0.40 |           |                                                  |      |                     |           |      |          |      |
| Nitrobenzene                | ND                              | 0.50 |           |                                                  |      |                     |           |      |          |      |
| 2-Nitrophenol               | ND                              | 0.20 |           |                                                  |      |                     |           |      |          |      |
| 4-Nitrophenol               | ND                              | 0.25 |           |                                                  |      |                     |           |      |          |      |
| Pentachlorophenol           | ND                              | 0.40 |           |                                                  |      |                     |           |      |          |      |
| Phenanthrene                | ND                              | 0.20 |           |                                                  |      |                     |           |      |          |      |
| Phenol                      | ND                              | 0.20 |           |                                                  |      |                     |           |      |          |      |
| Pyrene                      | ND                              | 0.20 |           |                                                  |      |                     |           |      |          |      |
| Pyridine                    | ND                              | 0.50 |           |                                                  |      |                     |           |      |          |      |
| 1,2,4-Trichlorobenzene      | ND                              | 0.20 |           |                                                  |      |                     |           |      |          |      |
| 2,4,5-Trichlorophenol       | ND                              | 0.20 |           |                                                  |      |                     |           |      |          |      |
| 2,4,6-Trichlorophenol       | ND                              | 0.20 |           |                                                  |      |                     |           |      |          |      |
| Surr: 2-Fluorophenol        | 2.2                             |      | 3.330     |                                                  | 66.7 | 21                  | 111       |      |          |      |
| Surr: Phenol-d5             | 2.2                             |      | 3.330     |                                                  | 67.5 | 23.1                | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol  | 1.9                             |      | 3.330     |                                                  | 57.0 | 22.7                | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5       | 1.2                             |      | 1.670     |                                                  | 72.7 | 24.5                | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl      | 1.1                             |      | 1.670     |                                                  | 67.2 | 21.2                | 129       |      |          |      |
| Surr: 4-Terphenyl-d14       | 1.3                             |      | 1.670     |                                                  | 77.9 | 39.4                | 107       |      |          |      |

| Sample ID <b>lcs-15483</b>  | SampType: <b>LCS</b>            |      |           | TestCode: <b>EPA Method 8270C: Semivolatiles</b> |      |                     |           |      |          |      |
|-----------------------------|---------------------------------|------|-----------|--------------------------------------------------|------|---------------------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>      | Batch ID: <b>15483</b>          |      |           | RunNo: <b>21456</b>                              |      |                     |           |      |          |      |
| Prep Date: <b>9/24/2014</b> | Analysis Date: <b>9/25/2014</b> |      |           | SeqNo: <b>627717</b>                             |      | Units: <b>mg/Kg</b> |           |      |          |      |
| Analyte                     | Result                          | PQL  | SPK value | SPK Ref Val                                      | %REC | LowLimit            | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene                | 1.2                             | 0.20 | 1.670     | 0                                                | 71.4 | 50.7                | 110       |      |          |      |
| 4-Chloro-3-methylphenol     | 2.7                             | 0.50 | 3.330     | 0                                                | 81.5 | 47.8                | 107       |      |          |      |
| 2-Chlorophenol              | 2.7                             | 0.20 | 3.330     | 0                                                | 80.1 | 45.7                | 108       |      |          |      |
| 1,4-Dichlorobenzene         | 1.1                             | 0.20 | 1.670     | 0                                                | 66.3 | 46.1                | 112       |      |          |      |
| 2,4-Dinitrotoluene          | 0.99                            | 0.50 | 1.670     | 0                                                | 59.0 | 44.9                | 114       |      |          |      |
| N-Nitrosodi-n-propylamine   | 1.1                             | 0.20 | 1.670     | 0                                                | 67.0 | 38.7                | 128       |      |          |      |
| 4-Nitrophenol               | 2.3                             | 0.25 | 3.330     | 0                                                | 69.5 | 40.2                | 103       |      |          |      |
| Pentachlorophenol           | 1.6                             | 0.40 | 3.330     | 0                                                | 48.2 | 32.9                | 94        |      |          |      |
| Phenol                      | 2.6                             | 0.20 | 3.330     | 0                                                | 78.0 | 44.1                | 109       |      |          |      |
| Pyrene                      | 1.3                             | 0.20 | 1.670     | 0                                                | 76.5 | 51.9                | 109       |      |          |      |
| 1,2,4-Trichlorobenzene      | 1.1                             | 0.20 | 1.670     | 0                                                | 64.9 | 49.5                | 115       |      |          |      |
| Surr: 2-Fluorophenol        | 2.4                             |      | 3.330     |                                                  | 71.4 | 21                  | 111       |      |          |      |

### Qualifiers:

- |                                                   |                                                      |
|---------------------------------------------------|------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |                                                      |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |                  |     |                                 |             |                                                  |          |                     |      |          |      |
|----------------------------|------------------|-----|---------------------------------|-------------|--------------------------------------------------|----------|---------------------|------|----------|------|
| Sample ID                  | <b>Ics-15483</b> |     | SampType: <b>LCS</b>            |             | TestCode: <b>EPA Method 8270C: Semivolatiles</b> |          |                     |      |          |      |
| Client ID:                 | <b>LCSS</b>      |     | Batch ID: <b>15483</b>          |             | RunNo: <b>21456</b>                              |          |                     |      |          |      |
| Prep Date:                 | <b>9/24/2014</b> |     | Analysis Date: <b>9/25/2014</b> |             | SeqNo: <b>627717</b>                             |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                    | Result           | PQL | SPK value                       | SPK Ref Val | %REC                                             | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |
| Surr: Phenol-d5            | 2.5              |     | 3.330                           |             | 75.3                                             | 23.1     | 117                 |      |          |      |
| Surr: 2,4,6-Tribromophenol | 2.3              |     | 3.330                           |             | 68.4                                             | 22.7     | 88.9                |      |          |      |
| Surr: Nitrobenzene-d5      | 1.3              |     | 1.670                           |             | 77.7                                             | 24.5     | 126                 |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.3              |     | 1.670                           |             | 75.7                                             | 21.2     | 129                 |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.5              |     | 1.670                           |             | 87.6                                             | 39.4     | 107                 |      |          |      |

|                            |                           |      |                                 |             |                                                  |          |                         |      |          |      |
|----------------------------|---------------------------|------|---------------------------------|-------------|--------------------------------------------------|----------|-------------------------|------|----------|------|
| Sample ID                  | <b>1409955-009Ams</b>     |      | SampType: <b>MS</b>             |             | TestCode: <b>EPA Method 8270C: Semivolatiles</b> |          |                         |      |          |      |
| Client ID:                 | <b>SWMU 14-2 (0-0.5')</b> |      | Batch ID: <b>15483</b>          |             | RunNo: <b>21456</b>                              |          |                         |      |          |      |
| Prep Date:                 | <b>9/24/2014</b>          |      | Analysis Date: <b>9/26/2014</b> |             | SeqNo: <b>627783</b>                             |          | Units: <b>mg/Kg-dry</b> |      |          |      |
| Analyte                    | Result                    | PQL  | SPK value                       | SPK Ref Val | %REC                                             | LowLimit | HighLimit               | %RPD | RPDLimit | Qual |
| Acenaphthene               | 1.0                       | 0.22 | 1.823                           | 0           | 55.8                                             | 53.8     | 92.8                    |      |          |      |
| 4-Chloro-3-methylphenol    | 2.3                       | 0.55 | 3.635                           | 0           | 63.4                                             | 34.9     | 104                     |      |          |      |
| 2-Chlorophenol             | 1.9                       | 0.22 | 3.635                           | 0           | 52.3                                             | 18.2     | 105                     |      |          |      |
| 1,4-Dichlorobenzene        | 0.76                      | 0.22 | 1.823                           | 0           | 41.7                                             | 18.1     | 112                     |      |          |      |
| 2,4-Dinitrotoluene         | 0.98                      | 0.55 | 1.823                           | 0           | 54.0                                             | 22       | 144                     |      |          |      |
| N-Nitrosodi-n-propylamine  | 0.92                      | 0.22 | 1.823                           | 0           | 50.7                                             | 58.6     | 101                     |      |          | S    |
| 4-Nitrophenol              | 2.3                       | 0.27 | 3.635                           | 0           | 64.3                                             | 13.7     | 127                     |      |          |      |
| Pentachlorophenol          | 0.78                      | 0.44 | 3.635                           | 0           | 21.4                                             | 16.5     | 107                     |      |          |      |
| Phenol                     | 1.9                       | 0.22 | 3.635                           | 0           | 51.1                                             | 12.5     | 114                     |      |          |      |
| Pyrene                     | 1.1                       | 0.22 | 1.823                           | 0           | 62.4                                             | 14.2     | 116                     |      |          |      |
| 1,2,4-Trichlorobenzene     | 0.84                      | 0.22 | 1.823                           | 0           | 46.0                                             | 16       | 125                     |      |          |      |
| Surr: 2-Fluorophenol       | 1.6                       |      | 3.635                           |             | 43.2                                             | 21       | 111                     |      |          |      |
| Surr: Phenol-d5            | 1.8                       |      | 3.635                           |             | 48.3                                             | 23.1     | 117                     |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.4                       |      | 3.635                           |             | 39.1                                             | 22.7     | 88.9                    |      |          |      |
| Surr: Nitrobenzene-d5      | 0.89                      |      | 1.823                           |             | 48.8                                             | 24.5     | 126                     |      |          |      |
| Surr: 2-Fluorobiphenyl     | 0.92                      |      | 1.823                           |             | 50.5                                             | 21.2     | 129                     |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.1                       |      | 1.823                           |             | 59.8                                             | 39.4     | 107                     |      |          |      |

|                           |                           |      |                                 |             |                                                  |          |                         |        |          |      |
|---------------------------|---------------------------|------|---------------------------------|-------------|--------------------------------------------------|----------|-------------------------|--------|----------|------|
| Sample ID                 | <b>1409955-009Amsd</b>    |      | SampType: <b>MSD</b>            |             | TestCode: <b>EPA Method 8270C: Semivolatiles</b> |          |                         |        |          |      |
| Client ID:                | <b>SWMU 14-2 (0-0.5')</b> |      | Batch ID: <b>15483</b>          |             | RunNo: <b>21456</b>                              |          |                         |        |          |      |
| Prep Date:                | <b>9/24/2014</b>          |      | Analysis Date: <b>9/26/2014</b> |             | SeqNo: <b>627784</b>                             |          | Units: <b>mg/Kg-dry</b> |        |          |      |
| Analyte                   | Result                    | PQL  | SPK value                       | SPK Ref Val | %REC                                             | LowLimit | HighLimit               | %RPD   | RPDLimit | Qual |
| Acenaphthene              | 1.0                       | 0.22 | 1.825                           | 0           | 55.8                                             | 53.8     | 92.8                    | 0.0647 | 22       |      |
| 4-Chloro-3-methylphenol   | 2.4                       | 0.55 | 3.638                           | 0           | 67.2                                             | 34.9     | 104                     | 5.97   | 27.3     |      |
| 2-Chlorophenol            | 2.0                       | 0.22 | 3.638                           | 0           | 55.8                                             | 18.2     | 105                     | 6.56   | 26.3     |      |
| 1,4-Dichlorobenzene       | 0.85                      | 0.22 | 1.825                           | 0           | 46.6                                             | 18.1     | 112                     | 11.2   | 27.4     |      |
| 2,4-Dinitrotoluene        | 0.99                      | 0.55 | 1.825                           | 0           | 54.2                                             | 22       | 144                     | 0.396  | 27.4     |      |
| N-Nitrosodi-n-propylamine | 0.97                      | 0.22 | 1.825                           | 0           | 52.9                                             | 58.6     | 101                     | 4.42   | 22.6     | S    |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |                    |      |                          |             |                                           |          |                  |      |          |      |
|----------------------------|--------------------|------|--------------------------|-------------|-------------------------------------------|----------|------------------|------|----------|------|
| Sample ID                  | 1409955-009Amsd    |      | SampType: MSD            |             | TestCode: EPA Method 8270C: Semivolatiles |          |                  |      |          |      |
| Client ID:                 | SWMU 14-2 (0-0.5') |      | Batch ID: 15483          |             | RunNo: 21456                              |          |                  |      |          |      |
| Prep Date:                 | 9/24/2014          |      | Analysis Date: 9/26/2014 |             | SeqNo: 627784                             |          | Units: mg/Kg-dry |      |          |      |
| Analyte                    | Result             | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| 4-Nitrophenol              | 2.4                | 0.27 | 3.638                    | 0           | 65.8                                      | 13.7     | 127              | 2.46 | 20       |      |
| Pentachlorophenol          | 0.99               | 0.44 | 3.638                    | 0           | 27.3                                      | 16.5     | 107              | 24.4 | 27.1     |      |
| Phenol                     | 2.1                | 0.22 | 3.638                    | 0           | 57.2                                      | 12.5     | 114              | 11.5 | 32.2     |      |
| Pyrene                     | 1.3                | 0.22 | 1.825                    | 0           | 69.0                                      | 14.2     | 116              | 10.1 | 29.5     |      |
| 1,2,4-Trichlorobenzene     | 0.92               | 0.22 | 1.825                    | 0           | 50.5                                      | 16       | 125              | 9.37 | 27.8     |      |
| Surr: 2-Fluorophenol       | 1.7                |      | 3.638                    |             | 47.9                                      | 21       | 111              | 0    | 0        |      |
| Surr: Phenol-d5            | 2.0                |      | 3.638                    |             | 54.4                                      | 23.1     | 117              | 0    | 0        |      |
| Surr: 2,4,6-Tribromophenol | 1.6                |      | 3.638                    |             | 42.9                                      | 22.7     | 88.9             | 0    | 0        |      |
| Surr: Nitrobenzene-d5      | 1.0                |      | 1.825                    |             | 55.8                                      | 24.5     | 126              | 0    | 0        |      |
| Surr: 2-Fluorobiphenyl     | 1.0                |      | 1.825                    |             | 56.8                                      | 21.2     | 129              | 0    | 0        |      |
| Surr: 4-Terphenyl-d14      | 1.1                |      | 1.825                    |             | 62.6                                      | 39.4     | 107              | 0    | 0        |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | MB-15505  |       | SampType: MBLK           |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | PBS       |       | Batch ID: 15505          |             | RunNo: 21480                       |          |              |      |          |      |
| Prep Date: | 9/25/2014 |       | Analysis Date: 9/26/2014 |             | SeqNo: 628099                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercury    | ND        | 0.033 |                          |             |                                    |          |              |      |          |      |

|            |           |       |           |                |           |          |           |                          |          |        |       |
|------------|-----------|-------|-----------|----------------|-----------|----------|-----------|--------------------------|----------|--------|-------|
| Sample ID  | LCS-15505 |       |           | SampType:      | LCS       |          | TestCode: | EPA Method 7471: Mercury |          |        |       |
| Client ID: | LCSS      |       |           | Batch ID:      | 15505     |          | RunNo:    | 21480                    |          |        |       |
| Prep Date: | 9/25/2014 |       |           | Analysis Date: | 9/26/2014 |          | SeqNo:    | 628100                   |          | Units: | mg/Kg |
| Analyte    | Result    | PQL   | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD                     | RPDLimit | Qual   |       |
| Mercury    | 0.17      | 0.033 | 0.1667    | 0              | 100       | 80       | 120       |                          |          |        |       |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>MB-15558</b>  |      | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>PBS</b>       |      | Batch ID:      | <b>15558</b>     |      | RunNo:    | <b>21583</b>                         |      |                     |      |
| Prep Date: | <b>9/27/2014</b> |      | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632355</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Arsenic    | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Barium     | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Beryllium  | ND               | 0.15 |                |                  |      |           |                                      |      |                     |      |
| Cadmium    | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Chromium   | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Cobalt     | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Lead       | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Nickel     | ND               | 0.50 |                |                  |      |           |                                      |      |                     |      |
| Selenium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Silver     | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Vanadium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>LCS-15558</b> |      | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>LCSS</b>      |      | Batch ID:      | <b>15558</b>     |      | RunNo:    | <b>21583</b>                         |      |                     |      |
| Prep Date: | <b>9/27/2014</b> |      | Analysis Date: | <b>10/1/2014</b> |      | SeqNo:    | <b>632356</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | 25               | 2.5  | 25.00          | 0                | 98.4 | 80        | 120                                  |      |                     |      |
| Arsenic    | 24               | 2.5  | 25.00          | 0                | 94.4 | 80        | 120                                  |      |                     |      |
| Barium     | 25               | 0.10 | 25.00          | 0                | 100  | 80        | 120                                  |      |                     |      |
| Beryllium  | 25               | 0.15 | 25.00          | 0                | 100  | 80        | 120                                  |      |                     |      |
| Cadmium    | 24               | 0.10 | 25.00          | 0                | 97.5 | 80        | 120                                  |      |                     |      |
| Chromium   | 25               | 0.30 | 25.00          | 0                | 99.1 | 80        | 120                                  |      |                     |      |
| Cobalt     | 25               | 0.30 | 25.00          | 0                | 98.8 | 80        | 120                                  |      |                     |      |
| Lead       | 24               | 0.25 | 25.00          | 0                | 97.5 | 80        | 120                                  |      |                     |      |
| Nickel     | 25               | 0.50 | 25.00          | 0                | 100  | 80        | 120                                  |      |                     |      |
| Selenium   | 24               | 2.5  | 25.00          | 0                | 94.5 | 80        | 120                                  |      |                     |      |
| Silver     | 4.9              | 0.25 | 5.000          | 0                | 97.9 | 80        | 120                                  |      |                     |      |
| Vanadium   | 25               | 2.5  | 25.00          | 0                | 101  | 80        | 120                                  |      |                     |      |

|            |                  |     |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|-----|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>MB-15558</b>  |     | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>PBS</b>       |     | Batch ID:      | <b>15558</b>     |      | RunNo:    | <b>21599</b>                         |      |                     |      |
| Prep Date: | <b>9/27/2014</b> |     | Analysis Date: | <b>10/2/2014</b> |      | SeqNo:    | <b>633628</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Zinc       | ND               | 2.5 |                |                  |      |           |                                      |      |                     |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409955

16-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |     |                          |             |                                         |          |              |      |          |      |
|------------|-----------|-----|--------------------------|-------------|-----------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | LCS-15558 |     | SampType: LCS            |             | TestCode: EPA Method 6010B: Soil Metals |          |              |      |          |      |
| Client ID: | LCSS      |     | Batch ID: 15558          |             | RunNo: 21599                            |          |              |      |          |      |
| Prep Date: | 9/27/2014 |     | Analysis Date: 10/2/2014 |             | SeqNo: 633629                           |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                    | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Zinc       | 22        | 2.5 | 25.00                    | 0           | 89.5                                    | 80       | 120          |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409955

RcptNo: 1

Received by/date:

*As 09/19/14*

Logged By: Anne Thorne

9/19/2014 7:00:00 AM

*Anne Thorne*

Completed By: Anne Thorne

9/19/2014

*Anne Thorne*

Reviewed By:

*AT*
*09/19/14*

## Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

## Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

(&lt;2 or &gt;12 unless noted)

Adjusted?

Checked by:

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☒ NA ☐

Person Notified:

Date

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

## 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 1.9     | Good      | Yes         |         |           |           |







Metals and Cyanide for Soil and Groundwater Samples

TOTAL AND DISSOLVED FOR GW SAMPLES

| Analyte                    | Analytical Method              |
|----------------------------|--------------------------------|
| Antimony                   | SW-846 method 6010/6020        |
| Arsenic                    | SW-846 method 6010/6020        |
| Barium                     | SW-846 method 6010/6020        |
| Beryllium                  | SW-846 method 6010/6020        |
| Cadmium                    | SW-846 method 6010/6020        |
| Chromium                   | SW-846 method 6010/6020        |
| <del>Chromium VI</del>     | <del>SW-846 Method 3060A</del> |
| Cobalt                     | SW-846 method 6010/6020        |
| Cyanide                    | SW-846 method 335.4/335.2 mod  |
| Lead                       | SW-846 method 6010/6020        |
| <del>Tetraethyl lead</del> | <del>SW-846 method 8270C</del> |
| Mercury                    | SW-846 method 7470/7471        |
| Nickel                     | SW-846 method 6010/6020        |
| Selenium                   | SW-846 method 6010/6020        |
| Silver                     | SW-846 method 6010/6020        |
| Vanadium                   | SW-846 method 6010/6020        |
| Zinc                       | SW-846 method 6010/6020        |





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 23, 2014

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1409961

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/19/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-001A

**Client Sample ID:** SWMU 14 EB01  
**Collection Date:** 9/18/2014 11:10:00 AM  
**Matrix:** Aqueous

| Analyses                                | Result | RL       | Qual | Units        | DF | Date Analyzed        | Batch ID |
|-----------------------------------------|--------|----------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8015D: GASOLINE RANGE</b> |        |          |      | Analyst: NSB |    |                      |          |
| Gasoline Range Organics (GRO)           | ND     | 0.050    |      | mg/L         | 1  | 9/19/2014 5:58:17 PM | R21330   |
| Surr: BFB                               | 93.0   | 70.9-130 |      | %REC         | 1  | 9/19/2014 5:58:17 PM | R21330   |
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |          |      | Analyst: RAA |    |                      |          |
| Benzene                                 | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Toluene                                 | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Ethylbenzene                            | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Methyl tert-butyl ether (MTBE)          | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,2,4-Trimethylbenzene                  | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,3,5-Trimethylbenzene                  | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,2-Dichloroethane (EDC)                | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,2-Dibromoethane (EDB)                 | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Naphthalene                             | ND     | 2.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1-Methylnaphthalene                     | ND     | 4.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 2-Methylnaphthalene                     | ND     | 4.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Acetone                                 | ND     | 10       |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Bromobenzene                            | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Bromodichloromethane                    | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Bromoform                               | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Bromomethane                            | ND     | 3.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 2-Butanone                              | ND     | 10       |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Carbon disulfide                        | ND     | 10       |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Carbon Tetrachloride                    | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Chlorobenzene                           | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Chloroethane                            | ND     | 2.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Chloroform                              | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Chloromethane                           | ND     | 3.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 2-Chlorotoluene                         | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 4-Chlorotoluene                         | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| cis-1,2-DCE                             | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| cis-1,3-Dichloropropene                 | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,2-Dibromo-3-chloropropane             | ND     | 2.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Dibromochloromethane                    | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Dibromomethane                          | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,2-Dichlorobenzene                     | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,3-Dichlorobenzene                     | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,4-Dichlorobenzene                     | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Dichlorodifluoromethane                 | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,1-Dichloroethane                      | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,1-Dichloroethene                      | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,2-Dichloropropane                     | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-001A

**Client Sample ID:** SWMU 14 EB01  
**Collection Date:** 9/18/2014 11:10:00 AM  
**Matrix:** Aqueous

| Analyses                           | Result | RL     | Qual | Units        | DF | Date Analyzed        | Batch ID |
|------------------------------------|--------|--------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: RAA |    |                      |          |
| 1,3-Dichloropropane                | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 2,2-Dichloropropane                | ND     | 2.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,1-Dichloropropene                | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Hexachlorobutadiene                | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 2-Hexanone                         | ND     | 10     |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Isopropylbenzene                   | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 4-Isopropyltoluene                 | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 4-Methyl-2-pentanone               | ND     | 10     |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Methylene Chloride                 | ND     | 3.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| n-Butylbenzene                     | ND     | 3.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| n-Propylbenzene                    | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| sec-Butylbenzene                   | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Styrene                            | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| tert-Butylbenzene                  | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,1,1,2-Tetrachloroethane          | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,1,2,2-Tetrachloroethane          | ND     | 2.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Tetrachloroethene (PCE)            | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| trans-1,2-DCE                      | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| trans-1,3-Dichloropropene          | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,2,3-Trichlorobenzene             | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,2,4-Trichlorobenzene             | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,1,1-Trichloroethane              | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,1,2-Trichloroethane              | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Trichloroethene (TCE)              | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Trichlorofluoromethane             | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| 1,2,3-Trichloropropane             | ND     | 2.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Vinyl chloride                     | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Xylenes, Total                     | ND     | 1.5    |      | µg/L         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Surr: 1,2-Dichloroethane-d4        | 89.7   | 70-130 |      | %REC         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Surr: 4-Bromofluorobenzene         | 89.8   | 70-130 |      | %REC         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Surr: Dibromofluoromethane         | 98.8   | 70-130 |      | %REC         | 1  | 9/19/2014 2:23:12 PM | R21325   |
| Surr: Toluene-d8                   | 99.2   | 70-130 |      | %REC         | 1  | 9/19/2014 2:23:12 PM | R21325   |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-001B

**Client Sample ID:** SWMU 14 EB01  
**Collection Date:** 9/18/2014 11:10:00 AM  
**Matrix:** Aqueous

| Analyses                               | Result | RL | Qual | Units        | DF | Date Analyzed         | Batch ID |
|----------------------------------------|--------|----|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |    |      | Analyst: JDC |    |                       |          |
| Acenaphthene                           | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Acenaphthylene                         | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Aniline                                | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Anthracene                             | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Azobenzene                             | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Benz(a)anthracene                      | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Benzo(a)pyrene                         | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Benzo(b)fluoranthene                   | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Benzo(g,h,i)perylene                   | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Benzo(k)fluoranthene                   | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Benzoic acid                           | ND     | 20 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Benzyl alcohol                         | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Bis(2-chloroethoxy)methane             | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Bis(2-chloroethyl)ether                | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Bis(2-chloroisopropyl)ether            | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Bis(2-ethylhexyl)phthalate             | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 4-Bromophenyl phenyl ether             | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Butyl benzyl phthalate                 | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Carbazole                              | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 4-Chloro-3-methylphenol                | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 4-Chloroaniline                        | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2-Chloronaphthalene                    | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2-Chlorophenol                         | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 4-Chlorophenyl phenyl ether            | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Chrysene                               | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Di-n-butyl phthalate                   | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Di-n-octyl phthalate                   | ND     | 20 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Dibenz(a,h)anthracene                  | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Dibenzofuran                           | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 1,2-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 1,3-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 1,4-Dichlorobenzene                    | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 3,3'-Dichlorobenzidine                 | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Diethyl phthalate                      | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Dimethyl phthalate                     | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2,4-Dichlorophenol                     | ND     | 20 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2,4-Dimethylphenol                     | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 4,6-Dinitro-2-methylphenol             | ND     | 20 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2,4-Dinitrophenol                      | ND     | 20 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2,4-Dinitrotoluene                     | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2,6-Dinitrotoluene                     | ND     | 10 |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-001B

**Client Sample ID:** SWMU 14 EB01  
**Collection Date:** 9/18/2014 11:10:00 AM  
**Matrix:** Aqueous

| Analyses                               | Result | RL        | Qual | Units        | DF | Date Analyzed         | Batch ID |
|----------------------------------------|--------|-----------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC |    |                       |          |
| Fluoranthene                           | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Fluorene                               | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Hexachlorobenzene                      | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Hexachlorobutadiene                    | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Hexachlorocyclopentadiene              | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Hexachloroethane                       | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Isophorone                             | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 1-Methylnaphthalene                    | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2-Methylnaphthalene                    | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2-Methylphenol                         | ND     | 20        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 3+4-Methylphenol                       | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| N-Nitrosodi-n-propylamine              | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| N-Nitrosodimethylamine                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| N-Nitrosodiphenylamine                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Naphthalene                            | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 3-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 4-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Nitrobenzene                           | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 4-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Pentachlorophenol                      | ND     | 20        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Phenanthrene                           | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Phenol                                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Pyrene                                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Pyridine                               | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| 2,4,6-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Surr: 2-Fluorophenol                   | 81.4   | 12.1-85.8 |      | %REC         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Surr: Phenol-d5                        | 69.3   | 17.7-65.8 | S    | %REC         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Surr: 2,4,6-Tribromophenol             | 73.6   | 26-138    |      | %REC         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Surr: Nitrobenzene-d5                  | 99.4   | 47.5-119  |      | %REC         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Surr: 2-Fluorobiphenyl                 | 95.9   | 48.1-106  |      | %REC         | 1  | 9/24/2014 11:39:49 AM | 15440    |
| Surr: 4-Terphenyl-d14                  | 95.2   | 44-113    |      | %REC         | 1  | 9/24/2014 11:39:49 AM | 15440    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-001C

**Client Sample ID:** SWMU 14 EB01  
**Collection Date:** 9/18/2014 11:10:00 AM  
**Matrix:** Aqueous

| Analyses                              | Result | RL     | Qual | Units | DF | Date Analyzed         | Batch ID            |
|---------------------------------------|--------|--------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE</b> |        |        |      |       |    |                       | Analyst: <b>BCN</b> |
| Diesel Range Organics (DRO)           | ND     | 1.0    |      | mg/L  | 1  | 9/23/2014 10:30:33 PM | 15389               |
| Motor Oil Range Organics (MRO)        | ND     | 5.0    |      | mg/L  | 1  | 9/23/2014 10:30:33 PM | 15389               |
| Surr: DNOP                            | 126    | 59-141 |      | %REC  | 1  | 9/23/2014 10:30:33 PM | 15389               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-001D

**Client Sample ID:** SWMU 14 EB01  
**Collection Date:** 9/18/2014 11:10:00 AM  
**Matrix:** Aqueous

| Analyses                                   | Result | RL   | Qual | Units      | DF | Date Analyzed         | Batch ID            |
|--------------------------------------------|--------|------|------|------------|----|-----------------------|---------------------|
| <b>EPA METHOD 300.0: ANIONS</b>            |        |      |      |            |    |                       | Analyst: <b>JRR</b> |
| Chloride                                   | ND     | 0.50 |      | mg/L       | 1  | 9/19/2014 12:06:22 PM | R21346              |
| Nitrogen, Nitrite (As N)                   | ND     | 0.10 |      | mg/L       | 1  | 9/19/2014 12:06:22 PM | R21346              |
| Nitrogen, Nitrate (As N)                   | ND     | 0.10 |      | mg/L       | 1  | 9/19/2014 12:06:22 PM | R21346              |
| Sulfate                                    | ND     | 0.50 |      | mg/L       | 1  | 9/19/2014 12:06:22 PM | R21346              |
| <b>SM2320B: ALKALINITY</b>                 |        |      |      |            |    |                       | Analyst: <b>JRR</b> |
| Bicarbonate (As CaCO3)                     | ND     | 20   |      | mg/L CaCO3 | 1  | 9/19/2014 8:19:33 PM  | R21338              |
| Carbonate (As CaCO3)                       | ND     | 2.0  |      | mg/L CaCO3 | 1  | 9/19/2014 8:19:33 PM  | R21338              |
| Total Alkalinity (as CaCO3)                | ND     | 20   |      | mg/L CaCO3 | 1  | 9/19/2014 8:19:33 PM  | R21338              |
| <b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b> |        |      |      |            |    |                       | Analyst: <b>KS</b>  |
| Total Dissolved Solids                     | ND     | 20.0 |      | mg/L       | 1  | 9/24/2014 10:31:00 PM | 15452               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-001E

**Client Sample ID:** SWMU 14 EB01  
**Collection Date:** 9/18/2014 11:10:00 AM  
**Matrix:** Aqueous

| Analyses                              | Result | RL      | Qual | Units        | DF | Date Analyzed         | Batch ID |
|---------------------------------------|--------|---------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: TOTAL METALS</b> |        |         |      | Analyst: JLF |    |                       |          |
| Barium                                | ND     | 0.0020  |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Beryllium                             | ND     | 0.0020  |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Cadmium                               | ND     | 0.0020  |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Calcium                               | ND     | 1.0     |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Chromium                              | ND     | 0.0060  |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Cobalt                                | ND     | 0.0060  |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Iron                                  | ND     | 0.020   |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Lead                                  | ND     | 0.0050  |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Magnesium                             | ND     | 1.0     |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Manganese                             | ND     | 0.0020  |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Nickel                                | ND     | 0.010   |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Potassium                             | ND     | 1.0     |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Silver                                | ND     | 0.0050  |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Sodium                                | ND     | 1.0     |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Vanadium                              | ND     | 0.050   |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| Zinc                                  | ND     | 0.010   |      | mg/L         | 1  | 9/22/2014 3:23:24 PM  | 15400    |
| <b>200.8 ICPMS METALS:TOTAL</b>       |        |         |      | Analyst: DBD |    |                       |          |
| Antimony                              | ND     | 0.0010  |      | mg/L         | 1  | 9/29/2014 11:57:07 AM | 15400    |
| Arsenic                               | ND     | 0.0010  |      | mg/L         | 1  | 9/23/2014 2:35:43 PM  | 15400    |
| Selenium                              | ND     | 0.0010  |      | mg/L         | 1  | 9/23/2014 2:35:43 PM  | 15400    |
| <b>EPA METHOD 245.1: MERCURY</b>      |        |         |      | Analyst: MMD |    |                       |          |
| Mercury                               | ND     | 0.00020 |      | mg/L         | 1  | 9/26/2014 3:08:14 PM  | 15531    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-001F

**Client Sample ID:** SWMU 14 EB01  
**Collection Date:** 9/18/2014 11:10:00 AM  
**Matrix:** Aqueous

| Analyses                                  | Result | RL      | Qual | Units        | DF | Date Analyzed        | Batch ID |
|-------------------------------------------|--------|---------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 200.7: DISSOLVED METALS</b> |        |         |      | Analyst: JLF |    |                      |          |
| Barium                                    | ND     | 0.0020  |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Beryllium                                 | ND     | 0.0020  |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Cadmium                                   | ND     | 0.0020  |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Calcium                                   | ND     | 1.0     |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Chromium                                  | ND     | 0.0060  |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Cobalt                                    | ND     | 0.0060  |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Iron                                      | ND     | 0.020   |      | mg/L         | 1  | 9/26/2014 2:29:11 PM | R21505   |
| Lead                                      | ND     | 0.0050  |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Magnesium                                 | ND     | 1.0     |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Manganese                                 | ND     | 0.0020  |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Nickel                                    | ND     | 0.010   |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Potassium                                 | ND     | 1.0     |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Silver                                    | ND     | 0.0050  |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Sodium                                    | ND     | 1.0     |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Vanadium                                  | ND     | 0.050   |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| Zinc                                      | 0.021  | 0.010   |      | mg/L         | 1  | 9/19/2014 6:32:03 PM | R21336   |
| <b>EPA 200.8: DISSOLVED METALS</b>        |        |         |      | Analyst: DBD |    |                      |          |
| Antimony                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 1:39:31 PM | R21702   |
| Arsenic                                   | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 1:39:31 PM | R21702   |
| Selenium                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 1:39:31 PM | R21702   |
| <b>EPA METHOD 245.1: MERCURY</b>          |        |         |      | Analyst: MMD |    |                      |          |
| Mercury                                   | ND     | 0.00020 |      | mg/L         | 1  | 9/26/2014 3:10:03 PM | 15531    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-002A

**Client Sample ID:** SWMU 14 FB01  
**Collection Date:** 9/18/2014 11:25:00 AM  
**Matrix:** Aqueous

| Analyses                                | Result | RL       | Qual | Units        | DF | Date Analyzed        | Batch ID |
|-----------------------------------------|--------|----------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8015D: GASOLINE RANGE</b> |        |          |      | Analyst: NSB |    |                      |          |
| Gasoline Range Organics (GRO)           | ND     | 0.050    |      | mg/L         | 1  | 9/19/2014 6:28:35 PM | R21330   |
| Surr: BFB                               | 94.4   | 70.9-130 |      | %REC         | 1  | 9/19/2014 6:28:35 PM | R21330   |
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |          |      | Analyst: RAA |    |                      |          |
| Benzene                                 | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Toluene                                 | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Ethylbenzene                            | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Methyl tert-butyl ether (MTBE)          | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,2,4-Trimethylbenzene                  | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,3,5-Trimethylbenzene                  | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,2-Dichloroethane (EDC)                | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,2-Dibromoethane (EDB)                 | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Naphthalene                             | ND     | 2.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1-Methylnaphthalene                     | ND     | 4.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 2-Methylnaphthalene                     | ND     | 4.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Acetone                                 | ND     | 10       |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Bromobenzene                            | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Bromodichloromethane                    | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Bromoform                               | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Bromomethane                            | ND     | 3.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 2-Butanone                              | ND     | 10       |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Carbon disulfide                        | ND     | 10       |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Carbon Tetrachloride                    | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Chlorobenzene                           | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Chloroethane                            | ND     | 2.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Chloroform                              | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Chloromethane                           | ND     | 3.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 2-Chlorotoluene                         | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 4-Chlorotoluene                         | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| cis-1,2-DCE                             | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| cis-1,3-Dichloropropene                 | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,2-Dibromo-3-chloropropane             | ND     | 2.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Dibromochloromethane                    | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Dibromomethane                          | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,2-Dichlorobenzene                     | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,3-Dichlorobenzene                     | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,4-Dichlorobenzene                     | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Dichlorodifluoromethane                 | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,1-Dichloroethane                      | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,1-Dichloroethene                      | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,2-Dichloropropane                     | ND     | 1.0      |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-002A

**Client Sample ID:** SWMU 14 FB01  
**Collection Date:** 9/18/2014 11:25:00 AM  
**Matrix:** Aqueous

| Analyses                           | Result | RL     | Qual | Units        | DF | Date Analyzed        | Batch ID |
|------------------------------------|--------|--------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |        |      | Analyst: RAA |    |                      |          |
| 1,3-Dichloropropane                | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 2,2-Dichloropropane                | ND     | 2.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,1-Dichloropropene                | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Hexachlorobutadiene                | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 2-Hexanone                         | ND     | 10     |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Isopropylbenzene                   | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 4-Isopropyltoluene                 | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 4-Methyl-2-pentanone               | ND     | 10     |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Methylene Chloride                 | ND     | 3.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| n-Butylbenzene                     | ND     | 3.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| n-Propylbenzene                    | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| sec-Butylbenzene                   | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Styrene                            | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| tert-Butylbenzene                  | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,1,1,2-Tetrachloroethane          | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,1,2,2-Tetrachloroethane          | ND     | 2.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Tetrachloroethene (PCE)            | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| trans-1,2-DCE                      | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| trans-1,3-Dichloropropene          | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,2,3-Trichlorobenzene             | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,2,4-Trichlorobenzene             | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,1,1-Trichloroethane              | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,1,2-Trichloroethane              | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Trichloroethene (TCE)              | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Trichlorofluoromethane             | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| 1,2,3-Trichloropropane             | ND     | 2.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Vinyl chloride                     | ND     | 1.0    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Xylenes, Total                     | ND     | 1.5    |      | µg/L         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Surr: 1,2-Dichloroethane-d4        | 84.5   | 70-130 |      | %REC         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Surr: 4-Bromofluorobenzene         | 81.2   | 70-130 |      | %REC         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Surr: Dibromofluoromethane         | 97.8   | 70-130 |      | %REC         | 1  | 9/19/2014 2:51:35 PM | R21325   |
| Surr: Toluene-d8                   | 97.5   | 70-130 |      | %REC         | 1  | 9/19/2014 2:51:35 PM | R21325   |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-002B

**Client Sample ID:** SWMU 14 FB01  
**Collection Date:** 9/18/2014 11:25:00 AM  
**Matrix:** Aqueous

| Analyses                               | Result | RL | Qual | Units | DF | Date Analyzed        | Batch ID     |
|----------------------------------------|--------|----|------|-------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |    |      |       |    |                      | Analyst: JDC |
| Acenaphthene                           | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Acenaphthylene                         | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Aniline                                | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Anthracene                             | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Azobenzene                             | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Benz(a)anthracene                      | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Benzo(a)pyrene                         | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Benzo(b)fluoranthene                   | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Benzo(g,h,i)perylene                   | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Benzo(k)fluoranthene                   | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Benzoic acid                           | ND     | 20 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Benzyl alcohol                         | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Bis(2-chloroethoxy)methane             | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Bis(2-chloroethyl)ether                | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Bis(2-chloroisopropyl)ether            | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Bis(2-ethylhexyl)phthalate             | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 4-Bromophenyl phenyl ether             | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Butyl benzyl phthalate                 | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Carbazole                              | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 4-Chloro-3-methylphenol                | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 4-Chloroaniline                        | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 2-Chloronaphthalene                    | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 2-Chlorophenol                         | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 4-Chlorophenyl phenyl ether            | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Chrysene                               | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Di-n-butyl phthalate                   | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Di-n-octyl phthalate                   | ND     | 20 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Dibenz(a,h)anthracene                  | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Dibenzofuran                           | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 1,2-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 1,3-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 1,4-Dichlorobenzene                    | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 3,3'-Dichlorobenzidine                 | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Diethyl phthalate                      | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| Dimethyl phthalate                     | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 2,4-Dichlorophenol                     | ND     | 20 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 2,4-Dimethylphenol                     | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 4,6-Dinitro-2-methylphenol             | ND     | 20 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 2,4-Dinitrophenol                      | ND     | 20 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 2,4-Dinitrotoluene                     | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |
| 2,6-Dinitrotoluene                     | ND     | 10 |      | µg/L  | 1  | 9/24/2014 1:07:33 PM | 15440        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-002B

**Client Sample ID:** SWMU 14 FB01  
**Collection Date:** 9/18/2014 11:25:00 AM  
**Matrix:** Aqueous

| Analyses                               | Result | RL        | Qual | Units        | DF | Date Analyzed        | Batch ID |
|----------------------------------------|--------|-----------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC |    |                      |          |
| Fluoranthene                           | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Fluorene                               | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Hexachlorobenzene                      | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Hexachlorobutadiene                    | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Hexachlorocyclopentadiene              | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Hexachloroethane                       | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Isophorone                             | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 1-Methylnaphthalene                    | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 2-Methylnaphthalene                    | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 2-Methylphenol                         | ND     | 20        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 3+4-Methylphenol                       | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| N-Nitrosodi-n-propylamine              | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| N-Nitrosodimethylamine                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| N-Nitrosodiphenylamine                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Naphthalene                            | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 2-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 3-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 4-Nitroaniline                         | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Nitrobenzene                           | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 2-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 4-Nitrophenol                          | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Pentachlorophenol                      | ND     | 20        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Phenanthrene                           | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Phenol                                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Pyrene                                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Pyridine                               | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| 2,4,6-Trichlorophenol                  | ND     | 10        |      | µg/L         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Surr: 2-Fluorophenol                   | 73.6   | 12.1-85.8 |      | %REC         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Surr: Phenol-d5                        | 64.4   | 17.7-65.8 |      | %REC         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Surr: 2,4,6-Tribromophenol             | 65.4   | 26-138    |      | %REC         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Surr: Nitrobenzene-d5                  | 88.9   | 47.5-119  |      | %REC         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Surr: 2-Fluorobiphenyl                 | 87.2   | 48.1-106  |      | %REC         | 1  | 9/24/2014 1:07:33 PM | 15440    |
| Surr: 4-Terphenyl-d14                  | 91.7   | 44-113    |      | %REC         | 1  | 9/24/2014 1:07:33 PM | 15440    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-002C

**Client Sample ID:** SWMU 14 FB01  
**Collection Date:** 9/18/2014 11:25:00 AM  
**Matrix:** Aqueous

| Analyses                              | Result | RL     | Qual | Units | DF | Date Analyzed         | Batch ID            |
|---------------------------------------|--------|--------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE</b> |        |        |      |       |    |                       | Analyst: <b>BCN</b> |
| Diesel Range Organics (DRO)           | ND     | 1.0    |      | mg/L  | 1  | 9/23/2014 10:51:55 PM | 15389               |
| Motor Oil Range Organics (MRO)        | ND     | 5.0    |      | mg/L  | 1  | 9/23/2014 10:51:55 PM | 15389               |
| Surr: DNOP                            | 114    | 59-141 |      | %REC  | 1  | 9/23/2014 10:51:55 PM | 15389               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-002D

**Client Sample ID:** SWMU 14 FB01  
**Collection Date:** 9/18/2014 11:25:00 AM  
**Matrix:** Aqueous

| Analyses                                   | Result | RL   | Qual | Units      | DF | Date Analyzed         | Batch ID            |
|--------------------------------------------|--------|------|------|------------|----|-----------------------|---------------------|
| <b>EPA METHOD 300.0: ANIONS</b>            |        |      |      |            |    |                       | Analyst: <b>JRR</b> |
| Chloride                                   | ND     | 0.50 |      | mg/L       | 1  | 9/19/2014 12:56:00 PM | R21346              |
| Nitrogen, Nitrite (As N)                   | ND     | 0.10 |      | mg/L       | 1  | 9/19/2014 12:56:00 PM | R21346              |
| Nitrogen, Nitrate (As N)                   | 0.12   | 0.10 |      | mg/L       | 1  | 9/19/2014 12:56:00 PM | R21346              |
| Sulfate                                    | ND     | 0.50 |      | mg/L       | 1  | 9/19/2014 12:56:00 PM | R21346              |
| <b>SM2320B: ALKALINITY</b>                 |        |      |      |            |    |                       | Analyst: <b>JRR</b> |
| Bicarbonate (As CaCO3)                     | ND     | 20   |      | mg/L CaCO3 | 1  | 9/19/2014 8:25:26 PM  | R21338              |
| Carbonate (As CaCO3)                       | ND     | 2.0  |      | mg/L CaCO3 | 1  | 9/19/2014 8:25:26 PM  | R21338              |
| Total Alkalinity (as CaCO3)                | ND     | 20   |      | mg/L CaCO3 | 1  | 9/19/2014 8:25:26 PM  | R21338              |
| <b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b> |        |      |      |            |    |                       | Analyst: <b>KS</b>  |
| Total Dissolved Solids                     | ND     | 20.0 |      | mg/L       | 1  | 9/24/2014 10:31:00 PM | 15452               |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-002E

**Client Sample ID:** SWMU 14 FB01  
**Collection Date:** 9/18/2014 11:25:00 AM  
**Matrix:** Aqueous

| Analyses                              | Result | RL      | Qual | Units        | DF | Date Analyzed         | Batch ID |
|---------------------------------------|--------|---------|------|--------------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: TOTAL METALS</b> |        |         |      | Analyst: JLF |    |                       |          |
| Barium                                | ND     | 0.0020  |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Beryllium                             | ND     | 0.0020  |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Cadmium                               | ND     | 0.0020  |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Calcium                               | ND     | 1.0     |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Chromium                              | ND     | 0.0060  |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Cobalt                                | ND     | 0.0060  |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Iron                                  | ND     | 0.020   |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Lead                                  | ND     | 0.0050  |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Magnesium                             | ND     | 1.0     |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Manganese                             | ND     | 0.0020  |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Nickel                                | ND     | 0.010   |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Potassium                             | ND     | 1.0     |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Silver                                | ND     | 0.0050  |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Sodium                                | ND     | 1.0     |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Vanadium                              | ND     | 0.050   |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| Zinc                                  | ND     | 0.010   |      | mg/L         | 1  | 9/22/2014 3:28:58 PM  | 15400    |
| <b>200.8 ICPMS METALS:TOTAL</b>       |        |         |      | Analyst: DBD |    |                       |          |
| Antimony                              | ND     | 0.0010  |      | mg/L         | 1  | 9/29/2014 12:02:28 PM | 15400    |
| Arsenic                               | ND     | 0.0010  |      | mg/L         | 1  | 9/23/2014 2:38:49 PM  | 15400    |
| Selenium                              | ND     | 0.0010  |      | mg/L         | 1  | 9/23/2014 2:38:49 PM  | 15400    |
| <b>EPA METHOD 245.1: MERCURY</b>      |        |         |      | Analyst: MMD |    |                       |          |
| Mercury                               | ND     | 0.00020 |      | mg/L         | 1  | 9/26/2014 3:11:51 PM  | 15531    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1409961

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9  
**Lab ID:** 1409961-002F

**Client Sample ID:** SWMU 14 FB01  
**Collection Date:** 9/18/2014 11:25:00 AM  
**Matrix:** Aqueous

| Analyses                                  | Result | RL      | Qual | Units        | DF | Date Analyzed        | Batch ID |
|-------------------------------------------|--------|---------|------|--------------|----|----------------------|----------|
| <b>EPA METHOD 200.7: DISSOLVED METALS</b> |        |         |      | Analyst: JLF |    |                      |          |
| Barium                                    | ND     | 0.0020  |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Beryllium                                 | ND     | 0.0020  |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Cadmium                                   | ND     | 0.0020  |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Calcium                                   | ND     | 1.0     |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Chromium                                  | ND     | 0.0060  |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Cobalt                                    | ND     | 0.0060  |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Iron                                      | ND     | 0.020   |      | mg/L         | 1  | 9/26/2014 2:31:21 PM | R21505   |
| Lead                                      | ND     | 0.0050  |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Magnesium                                 | ND     | 1.0     |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Manganese                                 | ND     | 0.0020  |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Nickel                                    | ND     | 0.010   |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Potassium                                 | ND     | 1.0     |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Silver                                    | ND     | 0.0050  |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Sodium                                    | ND     | 1.0     |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Vanadium                                  | ND     | 0.050   |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| Zinc                                      | 0.010  | 0.010   |      | mg/L         | 1  | 9/19/2014 6:35:32 PM | R21336   |
| <b>EPA 200.8: DISSOLVED METALS</b>        |        |         |      | Analyst: DBD |    |                      |          |
| Antimony                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 1:44:53 PM | R21702   |
| Arsenic                                   | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 1:44:53 PM | R21702   |
| Selenium                                  | ND     | 0.0010  |      | mg/L         | 1  | 10/6/2014 1:44:53 PM | R21702   |
| <b>EPA METHOD 245.1: MERCURY</b>          |        |         |      | Analyst: MMD |    |                      |          |
| Mercury                                   | ND     | 0.00020 |      | mg/L         | 1  | 9/26/2014 3:13:40 PM | 15531    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                            |    |                                                    |
|--------------------|---|--------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.   | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit               | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits       | RL | Reporting Detection Limit                          |
|                    |   |                                            |    |                                                    |



# Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140923033  
**Project Name:** 1409961

## Analytical Results Report

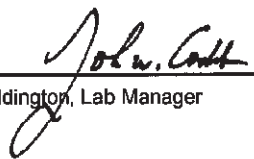
|                         |                             |                        |           |                           |                    |
|-------------------------|-----------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140923033-001               | <b>Sampling Date</b>   | 9/18/2014 | <b>Date/Time Received</b> | 9/23/2014 11:40 AM |
| <b>Client Sample ID</b> | 1409961-001G / SWMU 14 EB01 |                        |           | <b>Sampling Time</b>      | 11:10 AM           |
| <b>Matrix</b>           | Water                       | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                             |                        |           |                           |                    |

| Parameter | Result | Units | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|-------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/L  | 0.01 | 9/30/2014     | CRW     | EPA 335.4 |           |

|                         |                             |                        |           |                           |                    |
|-------------------------|-----------------------------|------------------------|-----------|---------------------------|--------------------|
| <b>Sample Number</b>    | 140923033-002               | <b>Sampling Date</b>   | 9/18/2014 | <b>Date/Time Received</b> | 9/23/2014 11:40 AM |
| <b>Client Sample ID</b> | 1409961-002G / SWMU 14 FB01 |                        |           | <b>Sampling Time</b>      | 11:25 AM           |
| <b>Matrix</b>           | Water                       | <b>Sample Location</b> |           |                           |                    |
| <b>Comments</b>         |                             |                        |           |                           |                    |

| Parameter | Result | Units | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|-------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/L  | 0.01 | 9/30/2014     | CRW     | EPA 335.4 |           |

Authorized Signature

  
John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level  
ND Not Detected  
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.  
The results reported relate only to the samples indicated.  
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Thursday, October 09, 2014

Page 1 of 1

# Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 140923033  
**Project Name:** 1409961

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|---------|-----------|---------------|
| Cyanide   | 0.489      | mg/L  | 0.5       | 97.8 | 90-110  | 9/30/2014 | 9/30/2014     |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec | AR %Rec | Prep Date | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|------|---------|-----------|---------------|
| 140923035-001 | Cyanide   | ND            | 0.490     | mg/L  | 0.5      | 98.0 | 90-110  | 9/30/2014 | 9/30/2014     |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec | %RPD | AR %RPD | Prep Date | Analysis Date |
|-----------|------------|-------|-----------|------|------|---------|-----------|---------------|
| Cyanide   | 0.484      | mg/L  | 0.5       | 96.8 | 1.2  | 0-20    | 9/30/2014 | 9/30/2014     |

### Method Blank

| Parameter | Result | Units | PQL  | Prep Date | Analysis Date |
|-----------|--------|-------|------|-----------|---------------|
| Cyanide   | ND     | mg/L  | 0.01 | 9/30/2014 | 9/30/2014     |

AR Acceptable Range  
ND Not Detected  
PQL Practical Quantitation Limit  
RPD Relative Percentage Difference

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |        |                |           |             |                                    |          |           |      |          |      |
|------------|--------|----------------|-----------|-------------|------------------------------------|----------|-----------|------|----------|------|
| Sample ID  | MB     | SampType:      | MBLK      | TestCode:   | EPA Method 200.7: Dissolved Metals |          |           |      |          |      |
| Client ID: | PBW    | Batch ID:      | R21336    | RunNo:      | 21336                              |          |           |      |          |      |
| Prep Date: |        | Analysis Date: | 9/19/2014 | SeqNo:      | 622776                             | Units:   | mg/L      |      |          |      |
| Analyte    | Result | PQL            | SPK value | SPK Ref Val | %REC                               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

|           |    |        |  |  |  |  |  |  |  |  |
|-----------|----|--------|--|--|--|--|--|--|--|--|
| Barium    | ND | 0.0020 |  |  |  |  |  |  |  |  |
| Beryllium | ND | 0.0020 |  |  |  |  |  |  |  |  |
| Cadmium   | ND | 0.0020 |  |  |  |  |  |  |  |  |
| Calcium   | ND | 1.0    |  |  |  |  |  |  |  |  |
| Chromium  | ND | 0.0060 |  |  |  |  |  |  |  |  |
| Lead      | ND | 0.0050 |  |  |  |  |  |  |  |  |
| Magnesium | ND | 1.0    |  |  |  |  |  |  |  |  |
| Manganese | ND | 0.0020 |  |  |  |  |  |  |  |  |
| Nickel    | ND | 0.010  |  |  |  |  |  |  |  |  |
| Potassium | ND | 1.0    |  |  |  |  |  |  |  |  |
| Silver    | ND | 0.0050 |  |  |  |  |  |  |  |  |
| Sodium    | ND | 1.0    |  |  |  |  |  |  |  |  |
| Vanadium  | ND | 0.050  |  |  |  |  |  |  |  |  |
| Zinc      | ND | 0.010  |  |  |  |  |  |  |  |  |

|            |        |                |           |             |                                    |          |           |      |          |      |
|------------|--------|----------------|-----------|-------------|------------------------------------|----------|-----------|------|----------|------|
| Sample ID  | LCS    | SampType:      | LCS       | TestCode:   | EPA Method 200.7: Dissolved Metals |          |           |      |          |      |
| Client ID: | LCSW   | Batch ID:      | R21336    | RunNo:      | 21336                              |          |           |      |          |      |
| Prep Date: |        | Analysis Date: | 9/19/2014 | SeqNo:      | 622777                             | Units:   | mg/L      |      |          |      |
| Analyte    | Result | PQL            | SPK value | SPK Ref Val | %REC                               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

|           |      |        |        |   |      |    |     |  |  |  |
|-----------|------|--------|--------|---|------|----|-----|--|--|--|
| Barium    | 0.46 | 0.0020 | 0.5000 | 0 | 91.9 | 85 | 115 |  |  |  |
| Beryllium | 0.48 | 0.0020 | 0.5000 | 0 | 96.1 | 85 | 115 |  |  |  |
| Cadmium   | 0.47 | 0.0020 | 0.5000 | 0 | 93.6 | 85 | 115 |  |  |  |
| Calcium   | 50   | 1.0    | 50.00  | 0 | 99.8 | 85 | 115 |  |  |  |
| Chromium  | 0.47 | 0.0060 | 0.5000 | 0 | 93.2 | 85 | 115 |  |  |  |
| Lead      | 0.45 | 0.0050 | 0.5000 | 0 | 90.6 | 85 | 115 |  |  |  |
| Magnesium | 51   | 1.0    | 50.00  | 0 | 101  | 85 | 115 |  |  |  |
| Manganese | 0.45 | 0.0020 | 0.5000 | 0 | 89.7 | 85 | 115 |  |  |  |
| Nickel    | 0.44 | 0.010  | 0.5000 | 0 | 88.9 | 85 | 115 |  |  |  |
| Potassium | 48   | 1.0    | 50.00  | 0 | 96.8 | 85 | 115 |  |  |  |
| Sodium    | 50   | 1.0    | 50.00  | 0 | 99.3 | 85 | 115 |  |  |  |
| Vanadium  | 0.49 | 0.050  | 0.5000 | 0 | 98.6 | 85 | 115 |  |  |  |
| Zinc      | 0.46 | 0.010  | 0.5000 | 0 | 91.8 | 85 | 115 |  |  |  |

|            |        |                |           |             |                                    |          |           |      |          |      |
|------------|--------|----------------|-----------|-------------|------------------------------------|----------|-----------|------|----------|------|
| Sample ID  | LCS Ag | SampType:      | LCS       | TestCode:   | EPA Method 200.7: Dissolved Metals |          |           |      |          |      |
| Client ID: | LCSW   | Batch ID:      | R21336    | RunNo:      | 21336                              |          |           |      |          |      |
| Prep Date: |        | Analysis Date: | 9/19/2014 | SeqNo:      | 622778                             | Units:   | mg/L      |      |          |      |
| Analyte    | Result | PQL            | SPK value | SPK Ref Val | %REC                               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

|        |       |        |        |   |      |    |     |  |  |  |
|--------|-------|--------|--------|---|------|----|-----|--|--|--|
| Silver | 0.096 | 0.0050 | 0.1000 | 0 | 95.7 | 85 | 115 |  |  |  |
|--------|-------|--------|--------|---|------|----|-----|--|--|--|

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |            |                |                  |             |                                           |          |             |      |          |      |
|------------|------------|----------------|------------------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | <b>MB</b>  | SampType:      | <b>MBLK</b>      | TestCode:   | <b>EPA Method 200.7: Dissolved Metals</b> |          |             |      |          |      |
| Client ID: | <b>PBW</b> | Batch ID:      | <b>R21336</b>    | RunNo:      | <b>21336</b>                              |          |             |      |          |      |
| Prep Date: |            | Analysis Date: | <b>9/19/2014</b> | SeqNo:      | <b>622779</b>                             | Units:   | <b>mg/L</b> |      |          |      |
| Analyte    | Result     | PQL            | SPK value        | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |

|           |    |        |  |  |  |  |  |  |  |  |
|-----------|----|--------|--|--|--|--|--|--|--|--|
| Barium    | ND | 0.0020 |  |  |  |  |  |  |  |  |
| Beryllium | ND | 0.0020 |  |  |  |  |  |  |  |  |
| Cadmium   | ND | 0.0020 |  |  |  |  |  |  |  |  |
| Calcium   | ND | 1.0    |  |  |  |  |  |  |  |  |
| Chromium  | ND | 0.0060 |  |  |  |  |  |  |  |  |
| Cobalt    | ND | 0.0060 |  |  |  |  |  |  |  |  |
| Lead      | ND | 0.0050 |  |  |  |  |  |  |  |  |
| Magnesium | ND | 1.0    |  |  |  |  |  |  |  |  |
| Manganese | ND | 0.0020 |  |  |  |  |  |  |  |  |
| Nickel    | ND | 0.010  |  |  |  |  |  |  |  |  |
| Potassium | ND | 1.0    |  |  |  |  |  |  |  |  |
| Silver    | ND | 0.0050 |  |  |  |  |  |  |  |  |
| Sodium    | ND | 1.0    |  |  |  |  |  |  |  |  |
| Vanadium  | ND | 0.050  |  |  |  |  |  |  |  |  |
| Zinc      | ND | 0.010  |  |  |  |  |  |  |  |  |

|            |             |                |                  |             |                                           |          |             |      |          |      |
|------------|-------------|----------------|------------------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | <b>LCS</b>  | SampType:      | <b>LCS</b>       | TestCode:   | <b>EPA Method 200.7: Dissolved Metals</b> |          |             |      |          |      |
| Client ID: | <b>LCSW</b> | Batch ID:      | <b>R21336</b>    | RunNo:      | <b>21336</b>                              |          |             |      |          |      |
| Prep Date: |             | Analysis Date: | <b>9/19/2014</b> | SeqNo:      | <b>622780</b>                             | Units:   | <b>mg/L</b> |      |          |      |
| Analyte    | Result      | PQL            | SPK value        | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |

|           |      |        |        |   |      |    |     |  |  |  |
|-----------|------|--------|--------|---|------|----|-----|--|--|--|
| Barium    | 0.47 | 0.0020 | 0.5000 | 0 | 94.1 | 85 | 115 |  |  |  |
| Beryllium | 0.49 | 0.0020 | 0.5000 | 0 | 98.5 | 85 | 115 |  |  |  |
| Cadmium   | 0.48 | 0.0020 | 0.5000 | 0 | 96.0 | 85 | 115 |  |  |  |
| Calcium   | 50   | 1.0    | 50.00  | 0 | 99.4 | 85 | 115 |  |  |  |
| Chromium  | 0.47 | 0.0060 | 0.5000 | 0 | 95.0 | 85 | 115 |  |  |  |
| Cobalt    | 0.46 | 0.0060 | 0.5000 | 0 | 91.0 | 85 | 115 |  |  |  |
| Lead      | 0.47 | 0.0050 | 0.5000 | 0 | 93.3 | 85 | 115 |  |  |  |
| Magnesium | 50   | 1.0    | 50.00  | 0 | 100  | 85 | 115 |  |  |  |
| Manganese | 0.46 | 0.0020 | 0.5000 | 0 | 91.5 | 85 | 115 |  |  |  |
| Nickel    | 0.45 | 0.010  | 0.5000 | 0 | 90.8 | 85 | 115 |  |  |  |
| Potassium | 48   | 1.0    | 50.00  | 0 | 96.2 | 85 | 115 |  |  |  |
| Sodium    | 49   | 1.0    | 50.00  | 0 | 98.5 | 85 | 115 |  |  |  |
| Vanadium  | 0.50 | 0.050  | 0.5000 | 0 | 100  | 85 | 115 |  |  |  |
| Zinc      | 0.47 | 0.010  | 0.5000 | 0 | 93.7 | 85 | 115 |  |  |  |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |               |                                 |        |           |             |                                                     |          |                    |      |          |      |
|------------|---------------|---------------------------------|--------|-----------|-------------|-----------------------------------------------------|----------|--------------------|------|----------|------|
| Sample ID  | <b>LCS Ag</b> | SampType: <b>LCS</b>            |        |           |             | TestCode: <b>EPA Method 200.7: Dissolved Metals</b> |          |                    |      |          |      |
| Client ID: | <b>LCSW</b>   | Batch ID: <b>R21336</b>         |        |           |             | RunNo: <b>21336</b>                                 |          |                    |      |          |      |
| Prep Date: |               | Analysis Date: <b>9/19/2014</b> |        |           |             | SeqNo: <b>622781</b>                                |          | Units: <b>mg/L</b> |      |          |      |
| Analyte    |               | Result                          | PQL    | SPK value | SPK Ref Val | %REC                                                | LowLimit | HighLimit          | %RPD | RPDLimit | Qual |
| Silver     |               | 0.10                            | 0.0050 | 0.1000    | 0           | 102                                                 | 85       | 115                |      |          |      |

|            |            |                                 |       |           |             |                                                     |          |                    |      |          |      |
|------------|------------|---------------------------------|-------|-----------|-------------|-----------------------------------------------------|----------|--------------------|------|----------|------|
| Sample ID  | <b>MB</b>  | SampType: <b>MBLK</b>           |       |           |             | TestCode: <b>EPA Method 200.7: Dissolved Metals</b> |          |                    |      |          |      |
| Client ID: | <b>PBW</b> | Batch ID: <b>R21505</b>         |       |           |             | RunNo: <b>21505</b>                                 |          |                    |      |          |      |
| Prep Date: |            | Analysis Date: <b>9/26/2014</b> |       |           |             | SeqNo: <b>629092</b>                                |          | Units: <b>mg/L</b> |      |          |      |
| Analyte    |            | Result                          | PQL   | SPK value | SPK Ref Val | %REC                                                | LowLimit | HighLimit          | %RPD | RPDLimit | Qual |
| Iron       |            | ND                              | 0.020 |           |             |                                                     |          |                    |      |          |      |

|            |             |                                 |       |           |             |                                                     |          |                    |      |          |      |
|------------|-------------|---------------------------------|-------|-----------|-------------|-----------------------------------------------------|----------|--------------------|------|----------|------|
| Sample ID  | <b>LCS</b>  | SampType: <b>LCS</b>            |       |           |             | TestCode: <b>EPA Method 200.7: Dissolved Metals</b> |          |                    |      |          |      |
| Client ID: | <b>LCSW</b> | Batch ID: <b>R21505</b>         |       |           |             | RunNo: <b>21505</b>                                 |          |                    |      |          |      |
| Prep Date: |             | Analysis Date: <b>9/26/2014</b> |       |           |             | SeqNo: <b>629093</b>                                |          | Units: <b>mg/L</b> |      |          |      |
| Analyte    |             | Result                          | PQL   | SPK value | SPK Ref Val | %REC                                                | LowLimit | HighLimit          | %RPD | RPDLimit | Qual |
| Iron       |             | 0.47                            | 0.020 | 0.5000    | 0           | 94.7                                                | 85       | 115                |      |          |      |

### Qualifiers:

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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |        |                          |             |                                          |          |             |      |          |      |
|------------|-----------|--------|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB-15400  |        | SampType: MBLK           |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | PBW       |        | Batch ID: 15400          |             | RunNo: 21354                             |          |             |      |          |      |
| Prep Date: | 9/19/2014 |        | Analysis Date: 9/22/2014 |             | SeqNo: 623601                            |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL    | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Beryllium  | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Cadmium    | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Calcium    | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Chromium   | ND        | 0.0060 |                          |             |                                          |          |             |      |          |      |
| Cobalt     | ND        | 0.0060 |                          |             |                                          |          |             |      |          |      |
| Iron       | ND        | 0.020  |                          |             |                                          |          |             |      |          |      |
| Lead       | ND        | 0.0050 |                          |             |                                          |          |             |      |          |      |
| Magnesium  | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Manganese  | ND        | 0.0020 |                          |             |                                          |          |             |      |          |      |
| Nickel     | ND        | 0.010  |                          |             |                                          |          |             |      |          |      |
| Potassium  | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Silver     | ND        | 0.0050 |                          |             |                                          |          |             |      |          |      |
| Sodium     | ND        | 1.0    |                          |             |                                          |          |             |      |          |      |
| Vanadium   | ND        | 0.050  |                          |             |                                          |          |             |      |          |      |
| Zinc       | ND        | 0.010  |                          |             |                                          |          |             |      |          |      |

|            |           |        |                          |             |                                          |          |             |      |          |      |
|------------|-----------|--------|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS-15400 |        | SampType: LCS            |             | TestCode: EPA Method 200.7: Total Metals |          |             |      |          |      |
| Client ID: | LCSW      |        | Batch ID: 15400          |             | RunNo: 21354                             |          |             |      |          |      |
| Prep Date: | 9/19/2014 |        | Analysis Date: 9/22/2014 |             | SeqNo: 623602                            |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL    | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Barium     | 0.49      | 0.0020 | 0.5000                   | 0           | 98.2                                     | 85       | 115         |      |          |      |
| Beryllium  | 0.52      | 0.0020 | 0.5000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Cadmium    | 0.49      | 0.0020 | 0.5000                   | 0           | 98.2                                     | 85       | 115         |      |          |      |
| Calcium    | 52        | 1.0    | 50.00                    | 0           | 105                                      | 85       | 115         |      |          |      |
| Chromium   | 0.49      | 0.0060 | 0.5000                   | 0           | 97.8                                     | 85       | 115         |      |          |      |
| Cobalt     | 0.47      | 0.0060 | 0.5000                   | 0           | 94.4                                     | 85       | 115         |      |          |      |
| Iron       | 0.48      | 0.020  | 0.5000                   | 0           | 96.8                                     | 85       | 115         |      |          |      |
| Lead       | 0.48      | 0.0050 | 0.5000                   | 0           | 96.5                                     | 85       | 115         |      |          |      |
| Magnesium  | 54        | 1.0    | 50.00                    | 0           | 107                                      | 85       | 115         |      |          |      |
| Manganese  | 0.48      | 0.0020 | 0.5000                   | 0           | 95.2                                     | 85       | 115         |      |          |      |
| Nickel     | 0.48      | 0.010  | 0.5000                   | 0           | 95.3                                     | 85       | 115         |      |          |      |
| Potassium  | 52        | 1.0    | 50.00                    | 0           | 103                                      | 85       | 115         |      |          |      |
| Silver     | 0.10      | 0.0050 | 0.1000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Sodium     | 53        | 1.0    | 50.00                    | 0           | 106                                      | 85       | 115         |      |          |      |
| Vanadium   | 0.52      | 0.050  | 0.5000                   | 0           | 104                                      | 85       | 115         |      |          |      |
| Zinc       | 0.49      | 0.010  | 0.5000                   | 0           | 97.4                                     | 85       | 115         |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID  | <b>1409961-001EMS</b> |        | SampType:      | <b>MS</b>        |      | TestCode: | <b>EPA Method 200.7: Total Metals</b> |      |                    |      |
|------------|-----------------------|--------|----------------|------------------|------|-----------|---------------------------------------|------|--------------------|------|
| Client ID: | <b>SWMU 14 EB01</b>   |        | Batch ID:      | <b>15400</b>     |      | RunNo:    | <b>21354</b>                          |      |                    |      |
| Prep Date: | <b>9/19/2014</b>      |        | Analysis Date: | <b>9/22/2014</b> |      | SeqNo:    | <b>623680</b>                         |      | Units: <b>mg/L</b> |      |
| Analyte    | Result                | PQL    | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                             | %RPD | RPDLimit           | Qual |
| Barium     | 0.50                  | 0.0020 | 0.5000         | 0                | 101  | 70        | 130                                   |      |                    |      |
| Beryllium  | 0.54                  | 0.0020 | 0.5000         | 0                | 108  | 70        | 130                                   |      |                    |      |
| Cadmium    | 0.50                  | 0.0020 | 0.5000         | 0                | 101  | 70        | 130                                   |      |                    |      |
| Calcium    | 54                    | 1.0    | 50.00          | 0.1013           | 107  | 70        | 130                                   |      |                    |      |
| Chromium   | 0.50                  | 0.0060 | 0.5000         | 0                | 99.8 | 70        | 130                                   |      |                    |      |
| Cobalt     | 0.49                  | 0.0060 | 0.5000         | 0                | 97.6 | 70        | 130                                   |      |                    |      |
| Iron       | 0.50                  | 0.020  | 0.5000         | 0                | 100  | 70        | 130                                   |      |                    |      |
| Lead       | 0.50                  | 0.0050 | 0.5000         | 0                | 99.8 | 70        | 130                                   |      |                    |      |
| Magnesium  | 53                    | 1.0    | 50.00          | 0                | 106  | 70        | 130                                   |      |                    |      |
| Manganese  | 0.49                  | 0.0020 | 0.5000         | 0                | 97.7 | 70        | 130                                   |      |                    |      |
| Nickel     | 0.49                  | 0.010  | 0.5000         | 0                | 99.0 | 70        | 130                                   |      |                    |      |
| Potassium  | 51                    | 1.0    | 50.00          | 0                | 103  | 70        | 130                                   |      |                    |      |
| Silver     | 0.11                  | 0.0050 | 0.1000         | 0                | 106  | 70        | 130                                   |      |                    |      |
| Sodium     | 52                    | 1.0    | 50.00          | 0.2632           | 104  | 70        | 130                                   |      |                    |      |
| Vanadium   | 0.53                  | 0.050  | 0.5000         | 0                | 106  | 70        | 130                                   |      |                    |      |
| Zinc       | 0.51                  | 0.010  | 0.5000         | 0                | 101  | 70        | 130                                   |      |                    |      |

| Sample ID  | <b>1409961-001EMSD</b> |        | SampType:      | <b>MSD</b>       |      | TestCode: | <b>EPA Method 200.7: Total Metals</b> |         |                    |      |
|------------|------------------------|--------|----------------|------------------|------|-----------|---------------------------------------|---------|--------------------|------|
| Client ID: | <b>SWMU 14 EB01</b>    |        | Batch ID:      | <b>15400</b>     |      | RunNo:    | <b>21354</b>                          |         |                    |      |
| Prep Date: | <b>9/19/2014</b>       |        | Analysis Date: | <b>9/22/2014</b> |      | SeqNo:    | <b>623682</b>                         |         | Units: <b>mg/L</b> |      |
| Analyte    | Result                 | PQL    | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                             | %RPD    | RPDLimit           | Qual |
| Barium     | 0.50                   | 0.0020 | 0.5000         | 0                | 99.4 | 70        | 130                                   | 1.50    | 20                 |      |
| Beryllium  | 0.53                   | 0.0020 | 0.5000         | 0                | 106  | 70        | 130                                   | 2.22    | 20                 |      |
| Cadmium    | 0.50                   | 0.0020 | 0.5000         | 0                | 99.2 | 70        | 130                                   | 1.74    | 20                 |      |
| Calcium    | 53                     | 1.0    | 50.00          | 0.1013           | 106  | 70        | 130                                   | 1.47    | 20                 |      |
| Chromium   | 0.50                   | 0.0060 | 0.5000         | 0                | 99.1 | 70        | 130                                   | 0.760   | 20                 |      |
| Cobalt     | 0.48                   | 0.0060 | 0.5000         | 0                | 96.0 | 70        | 130                                   | 1.74    | 20                 |      |
| Iron       | 0.50                   | 0.020  | 0.5000         | 0                | 100  | 70        | 130                                   | 0.00598 | 20                 |      |
| Lead       | 0.50                   | 0.0050 | 0.5000         | 0                | 99.2 | 70        | 130                                   | 0.647   | 20                 |      |
| Magnesium  | 53                     | 1.0    | 50.00          | 0                | 106  | 70        | 130                                   | 0.00944 | 20                 |      |
| Manganese  | 0.48                   | 0.0020 | 0.5000         | 0                | 96.3 | 70        | 130                                   | 1.44    | 20                 |      |
| Nickel     | 0.49                   | 0.010  | 0.5000         | 0                | 98.0 | 70        | 130                                   | 1.03    | 20                 |      |
| Potassium  | 51                     | 1.0    | 50.00          | 0                | 102  | 70        | 130                                   | 0.146   | 20                 |      |
| Silver     | 0.10                   | 0.0050 | 0.1000         | 0                | 102  | 70        | 130                                   | 3.07    | 20                 |      |
| Sodium     | 52                     | 1.0    | 50.00          | 0.2632           | 103  | 70        | 130                                   | 0.451   | 20                 |      |
| Vanadium   | 0.52                   | 0.050  | 0.5000         | 0                | 105  | 70        | 130                                   | 1.11    | 20                 |      |
| Zinc       | 0.50                   | 0.010  | 0.5000         | 0                | 99.7 | 70        | 130                                   | 1.57    | 20                 |      |

### Qualifiers:

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- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |        |        |           |                |           |          |           |                                       |          |      |  |        |      |  |
|------------|--------|--------|-----------|----------------|-----------|----------|-----------|---------------------------------------|----------|------|--|--------|------|--|
| Sample ID  | LCS    |        |           | SampType:      | LCS       |          |           | TestCode: EPA 200.8: Dissolved Metals |          |      |  |        |      |  |
| Client ID: | LCSW   |        |           | Batch ID:      | R21702    |          |           | RunNo: 21702                          |          |      |  |        |      |  |
| Prep Date: |        |        |           | Analysis Date: | 10/6/2014 |          |           | SeqNo:                                | 637046   |      |  | Units: | mg/L |  |
| Analyte    | Result | PQL    | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD                                  | RPDLimit | Qual |  |        |      |  |
| Antimony   | 0.024  | 0.0010 | 0.02500   | 0              | 95.6      | 85       | 115       |                                       |          |      |  |        |      |  |
| Arsenic    | 0.024  | 0.0010 | 0.02500   | 0              | 94.1      | 85       | 115       |                                       |          |      |  |        |      |  |
| Selenium   | 0.023  | 0.0010 | 0.02500   | 0              | 91.3      | 85       | 115       |                                       |          |      |  |        |      |  |

|            |        |                          |           |             |                                       |          |             |      |          |      |
|------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | MB     | SampType: MBLK           |           |             | TestCode: EPA 200.8: Dissolved Metals |          |             |      |          |      |
| Client ID: | PBW    | Batch ID: R21702         |           |             | RunNo: 21702                          |          |             |      |          |      |
| Prep Date: |        | Analysis Date: 10/6/2014 |           |             | SeqNo: 637048                         |          | Units: mg/L |      |          |      |
| Analyte    | Result | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Antimony   | ND     | 0.0010                   |           |             |                                       |          |             |      |          |      |
| Arsenic    | ND     | 0.0010                   |           |             |                                       |          |             |      |          |      |
| Selenium   | ND     | 0.0010                   |           |             |                                       |          |             |      |          |      |

### Qualifiers:

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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |             |                |           |             |                          |          |           |      |          |      |
|------------|-------------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID  | LLLCS-15400 | SampType:      | LCSLL     | TestCode:   | 200.8 ICPMS Metals:Total |          |           |      |          |      |
| Client ID: | BatchQC     | Batch ID:      | 15400     | RunNo:      | 21376                    |          |           |      |          |      |
| Prep Date: | 9/19/2014   | Analysis Date: | 9/23/2014 | SeqNo:      | 624370                   | Units:   | mg/L      |      |          |      |
| Analyte    | Result      | PQL            | SPK value | SPK Ref Val | %REC                     | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony   | 0.027       | 0.0010         | 0.02500   | 0           | 106                      | 85       | 115       |      |          |      |
| Arsenic    | 0.026       | 0.0010         | 0.02500   | 0           | 102                      | 85       | 115       |      |          |      |
| Selenium   | 0.025       | 0.0010         | 0.02500   | 0           | 102                      | 85       | 115       |      |          |      |

|            |           |                |           |             |           |                          |           |        |          |      |
|------------|-----------|----------------|-----------|-------------|-----------|--------------------------|-----------|--------|----------|------|
| Sample ID  | MB-15400  | SampType:      | MBLK      |             | TestCode: | 200.8 ICPMS Metals:Total |           |        |          |      |
| Client ID: | PBW       | Batch ID:      | 15400     |             | RunNo:    | 21376                    |           |        |          |      |
| Prep Date: | 9/19/2014 | Analysis Date: | 9/23/2014 |             | SeqNo:    | 624373                   |           | Units: | mg/L     |      |
| Analyte    | Result    | PQL            | SPK value | SPK Ref Val | %REC      | LowLimit                 | HighLimit | %RPD   | RPDLimit | Qual |
| Antimony   | ND        | 0.0010         |           |             |           |                          |           |        |          |      |
| Arsenic    | ND        | 0.0010         |           |             |           |                          |           |        |          |      |
| Selenium   | ND        | 0.0010         |           |             |           |                          |           |        |          |      |

### Qualifiers:

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J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |         |                |             |      |           |                           |      |             |      |  |
|------------|-----------|---------|----------------|-------------|------|-----------|---------------------------|------|-------------|------|--|
| Sample ID  | MB-15531  |         | SampType:      | MBLK        |      | TestCode: | EPA Method 245.1: Mercury |      |             |      |  |
| Client ID: | PBW       |         | Batch ID:      | 15531       |      | RunNo:    | 21492                     |      |             |      |  |
| Prep Date: | 9/26/2014 |         | Analysis Date: | 9/26/2014   |      | SeqNo:    | 628445                    |      | Units: mg/L |      |  |
| Analyte    | Result    | PQL     | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                 | %RPD | RPDLimit    | Qual |  |
| Mercury    | ND        | 0.00020 |                |             |      |           |                           |      |             |      |  |

|            |           |         |                          |             |                                     |          |             |      |          |      |
|------------|-----------|---------|--------------------------|-------------|-------------------------------------|----------|-------------|------|----------|------|
| Sample ID  | LCS-15531 |         | SampType: LCS            |             | TestCode: EPA Method 245.1: Mercury |          |             |      |          |      |
| Client ID: | LCSW      |         | Batch ID: 15531          |             | RunNo: 21492                        |          |             |      |          |      |
| Prep Date: | 9/26/2014 |         | Analysis Date: 9/26/2014 |             | SeqNo: 628446                       |          | Units: mg/L |      |          |      |
| Analyte    | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Mercury    | 0.0056    | 0.00020 | 0.005000                 | 0           | 111                                 | 80       | 120         |      |          |      |

### Qualifiers:

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S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
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ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID <b>MB</b>      | SampType: <b>MBLK</b>           |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|--------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b>    | Batch ID: <b>R21346</b>         |      | RunNo: <b>21346</b>                       |             |                    |          |           |      |          |      |
| Prep Date:               | Analysis Date: <b>9/19/2014</b> |      | SeqNo: <b>623207</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                  | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride                 | ND                              | 0.50 |                                           |             |                    |          |           |      |          |      |
| Nitrogen, Nitrite (As N) | ND                              | 0.10 |                                           |             |                    |          |           |      |          |      |
| Nitrogen, Nitrate (As N) | ND                              | 0.10 |                                           |             |                    |          |           |      |          |      |
| Sulfate                  | ND                              | 0.50 |                                           |             |                    |          |           |      |          |      |

| Sample ID <b>LCS</b>     | SampType: <b>LCS</b>            |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|--------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>LCSW</b>   | Batch ID: <b>R21346</b>         |      | RunNo: <b>21346</b>                       |             |                    |          |           |      |          |      |
| Prep Date:               | Analysis Date: <b>9/19/2014</b> |      | SeqNo: <b>623208</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                  | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride                 | 4.6                             | 0.50 | 5.000                                     | 0           | 91.0               | 90       | 110       |      |          |      |
| Nitrogen, Nitrite (As N) | 0.94                            | 0.10 | 1.000                                     | 0           | 93.8               | 90       | 110       |      |          |      |
| Nitrogen, Nitrate (As N) | 2.4                             | 0.10 | 2.500                                     | 0           | 95.1               | 90       | 110       |      |          |      |
| Sulfate                  | 9.3                             | 0.50 | 10.00                                     | 0           | 93.1               | 90       | 110       |      |          |      |

| Sample ID <b>1409961-001DMS</b> | SampType: <b>MS</b>             |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|---------------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>SWMU 14 EB01</b>  | Batch ID: <b>R21346</b>         |      | RunNo: <b>21346</b>                       |             |                    |          |           |      |          |      |
| Prep Date:                      | Analysis Date: <b>9/19/2014</b> |      | SeqNo: <b>623210</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                         | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride                        | 4.7                             | 0.50 | 5.000                                     | 0           | 93.8               | 92.6     | 107       |      |          |      |
| Nitrogen, Nitrite (As N)        | 0.97                            | 0.10 | 1.000                                     | 0           | 97.0               | 75.5     | 104       |      |          |      |
| Nitrogen, Nitrate (As N)        | 2.5                             | 0.10 | 2.500                                     | 0.07400     | 98.8               | 87.8     | 111       |      |          |      |
| Sulfate                         | 9.6                             | 0.50 | 10.00                                     | 0           | 96.0               | 90.4     | 111       |      |          |      |

| Sample ID <b>1409961-001DMSD</b> | SampType: <b>MSD</b>            |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |       |          |      |
|----------------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|-------|----------|------|
| Client ID: <b>SWMU 14 EB01</b>   | Batch ID: <b>R21346</b>         |      | RunNo: <b>21346</b>                       |             |                    |          |           |       |          |      |
| Prep Date:                       | Analysis Date: <b>9/19/2014</b> |      | SeqNo: <b>623211</b>                      |             | Units: <b>mg/L</b> |          |           |       |          |      |
| Analyte                          | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD  | RPDLimit | Qual |
| Chloride                         | 4.7                             | 0.50 | 5.000                                     | 0           | 93.5               | 92.6     | 107       | 0.352 | 20       |      |
| Nitrogen, Nitrite (As N)         | 0.97                            | 0.10 | 1.000                                     | 0           | 96.6               | 75.5     | 104       | 0.424 | 20       |      |
| Nitrogen, Nitrate (As N)         | 2.5                             | 0.10 | 2.500                                     | 0.07400     | 97.6               | 87.8     | 111       | 1.14  | 20       |      |
| Sulfate                          | 9.6                             | 0.50 | 10.00                                     | 0           | 95.6               | 90.4     | 111       | 0.448 | 20       |      |

| Sample ID <b>MB</b>   | SampType: <b>MBLK</b>           |     | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
|-----------------------|---------------------------------|-----|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b> | Batch ID: <b>R21346</b>         |     | RunNo: <b>21346</b>                       |             |                    |          |           |      |          |      |
| Prep Date:            | Analysis Date: <b>9/19/2014</b> |     | SeqNo: <b>623261</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte               | Result                          | PQL | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

### Qualifiers:

- |                                                   |                                                      |
|---------------------------------------------------|------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |                                                      |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                          |                                 |      |                                           |             |                    |          |           |      |          |      |
|--------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID <b>MB</b>      | SampType: <b>MBLK</b>           |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
| Client ID: <b>PBW</b>    | Batch ID: <b>R21346</b>         |      | RunNo: <b>21346</b>                       |             |                    |          |           |      |          |      |
| Prep Date:               | Analysis Date: <b>9/19/2014</b> |      | SeqNo: <b>623261</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                  | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride                 | ND                              | 0.50 |                                           |             |                    |          |           |      |          |      |
| Nitrogen, Nitrite (As N) | ND                              | 0.10 |                                           |             |                    |          |           |      |          |      |
| Nitrogen, Nitrate (As N) | ND                              | 0.10 |                                           |             |                    |          |           |      |          |      |
| Sulfate                  | ND                              | 0.50 |                                           |             |                    |          |           |      |          |      |

|                          |                                 |      |                                           |             |                    |          |           |      |          |      |
|--------------------------|---------------------------------|------|-------------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID <b>LCS</b>     | SampType: <b>LCS</b>            |      | TestCode: <b>EPA Method 300.0: Anions</b> |             |                    |          |           |      |          |      |
| Client ID: <b>LCSW</b>   | Batch ID: <b>R21346</b>         |      | RunNo: <b>21346</b>                       |             |                    |          |           |      |          |      |
| Prep Date:               | Analysis Date: <b>9/19/2014</b> |      | SeqNo: <b>623262</b>                      |             | Units: <b>mg/L</b> |          |           |      |          |      |
| Analyte                  | Result                          | PQL  | SPK value                                 | SPK Ref Val | %REC               | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride                 | 4.6                             | 0.50 | 5.000                                     | 0           | 91.3               | 90       | 110       |      |          |      |
| Nitrogen, Nitrite (As N) | 0.95                            | 0.10 | 1.000                                     | 0           | 94.9               | 90       | 110       |      |          |      |
| Nitrogen, Nitrate (As N) | 2.4                             | 0.10 | 2.500                                     | 0           | 95.2               | 90       | 110       |      |          |      |
| Sulfate                  | 9.4                             | 0.50 | 10.00                                     | 0           | 94.0               | 90       | 110       |      |          |      |

### Qualifiers:

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E Value above quantitation range  
J Analyte detected below quantitation limits  
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R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |     |                          |             |                                          |          |             |      |          |      |
|--------------------------------|-----------|-----|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                      | MB-15389  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Diesel Range |          |             |      |          |      |
| Client ID:                     | PBW       |     | Batch ID: 15389          |             | RunNo: 21359                             |          |             |      |          |      |
| Prep Date:                     | 9/18/2014 |     | Analysis Date: 9/23/2014 |             | SeqNo: 625279                            |          | Units: mg/L |      |          |      |
| Analyte                        | Result    | PQL | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 1.0 |                          |             |                                          |          |             |      |          |      |
| Motor Oil Range Organics (MRO) | ND        | 5.0 |                          |             |                                          |          |             |      |          |      |
| Surr: DNOP                     | 1.2       |     | 1.000                    |             | 119                                      | 59       | 141         |      |          |      |

|                             |           |     |                          |             |                                          |          |             |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                   | LCS-15389 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range |          |             |      |          |      |
| Client ID:                  | LCSW      |     | Batch ID: 15389          |             | RunNo: 21359                             |          |             |      |          |      |
| Prep Date:                  | 9/18/2014 |     | Analysis Date: 9/23/2014 |             | SeqNo: 625280                            |          | Units: mg/L |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 4.3       | 1.0 | 5.000                    | 0           | 86.6                                     | 69.7     | 142         |      |          |      |
| Surr: DNOP                  | 0.57      |     | 0.5000                   |             | 115                                      | 59       | 141         |      |          |      |

### Qualifiers:

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S Spike Recovery outside accepted recovery limits

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ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

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Project: GROUP 9

|                               |        |       |                          |             |                                            |          |             |      |          |      |
|-------------------------------|--------|-------|--------------------------|-------------|--------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                     | 5ML RB |       | SampType: MBLK           |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID:                    | PBW    |       | Batch ID: R21330         |             | RunNo: 21330                               |          |             |      |          |      |
| Prep Date:                    |        |       | Analysis Date: 9/19/2014 |             | SeqNo: 622459                              |          | Units: mg/L |      |          |      |
| Analyte                       | Result | PQL   | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND     | 0.050 |                          |             |                                            |          |             |      |          |      |
| Surr: BFB                     | 18     |       | 20.00                    |             | 89.3                                       | 70.9     | 130         |      |          |      |

|                               |               |       |                          |             |                                            |          |             |      |          |      |
|-------------------------------|---------------|-------|--------------------------|-------------|--------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS |       | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID:                    | LCSW          |       | Batch ID: R21330         |             | RunNo: 21330                               |          |             |      |          |      |
| Prep Date:                    |               |       | Analysis Date: 9/19/2014 |             | SeqNo: 622460                              |          | Units: mg/L |      |          |      |
| Analyte                       | Result        | PQL   | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.49          | 0.050 | 0.5000                   | 0           | 97.8                                       | 80       | 120         |      |          |      |
| Surr: BFB                     | 20            |       | 20.00                    |             | 97.9                                       | 70.9     | 130         |      |          |      |

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S Spike Recovery outside accepted recovery limits

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

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WO#: 1409961

23-Oct-14

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Project: GROUP 9

|                                |        |                          |           |             |                                       |          |             |      |          |      |
|--------------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID                      | 5mL-rb | SampType: MBLK           |           |             | TestCode: EPA Method 8260B: VOLATILES |          |             |      |          |      |
| Client ID:                     | PBW    | Batch ID: R21325         |           |             | RunNo: 21325                          |          |             |      |          |      |
| Prep Date:                     |        | Analysis Date: 9/19/2014 |           |             | SeqNo: 622334                         |          | Units: µg/L |      |          |      |
| Analyte                        | Result | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Benzene                        | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Toluene                        | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Ethylbenzene                   | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,2,4-Trimethylbenzene         | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,3,5-Trimethylbenzene         | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Naphthalene                    | ND     | 2.0                      |           |             |                                       |          |             |      |          |      |
| 1-Methylnaphthalene            | ND     | 4.0                      |           |             |                                       |          |             |      |          |      |
| 2-Methylnaphthalene            | ND     | 4.0                      |           |             |                                       |          |             |      |          |      |
| Acetone                        | ND     | 10                       |           |             |                                       |          |             |      |          |      |
| Bromobenzene                   | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Bromodichloromethane           | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Bromoform                      | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Bromomethane                   | ND     | 3.0                      |           |             |                                       |          |             |      |          |      |
| 2-Butanone                     | ND     | 10                       |           |             |                                       |          |             |      |          |      |
| Carbon disulfide               | ND     | 10                       |           |             |                                       |          |             |      |          |      |
| Carbon Tetrachloride           | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Chlorobenzene                  | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Chloroethane                   | ND     | 2.0                      |           |             |                                       |          |             |      |          |      |
| Chloroform                     | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Chloromethane                  | ND     | 3.0                      |           |             |                                       |          |             |      |          |      |
| 2-Chlorotoluene                | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 4-Chlorotoluene                | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| cis-1,2-DCE                    | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| cis-1,3-Dichloropropene        | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND     | 2.0                      |           |             |                                       |          |             |      |          |      |
| Dibromochloromethane           | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Dibromomethane                 | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,2-Dichlorobenzene            | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,3-Dichlorobenzene            | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,4-Dichlorobenzene            | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| Dichlorodifluoromethane        | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,1-Dichloroethane             | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,1-Dichloroethene             | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,2-Dichloropropane            | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 1,3-Dichloropropane            | ND     | 1.0                      |           |             |                                       |          |             |      |          |      |
| 2,2-Dichloropropane            | ND     | 2.0                      |           |             |                                       |          |             |      |          |      |

### Qualifiers:

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B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |                |           |             |                             |          |           |      |          |      |
|-----------------------------|--------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                   | 5mL-rb | SampType:      | MBLK      | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:                  | PBW    | Batch ID:      | R21325    | RunNo:      | 21325                       |          |           |      |          |      |
| Prep Date:                  |        | Analysis Date: | 9/19/2014 | SeqNo:      | 622334                      | Units:   | µg/L      |      |          |      |
| Analyte                     | Result | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1-Dichloropropene         | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Hexachlorobutadiene         | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 2-Hexanone                  | ND     | 10             |           |             |                             |          |           |      |          |      |
| Isopropylbenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 4-Isopropyltoluene          | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 4-Methyl-2-pentanone        | ND     | 10             |           |             |                             |          |           |      |          |      |
| Methylene Chloride          | ND     | 3.0            |           |             |                             |          |           |      |          |      |
| n-Butylbenzene              | ND     | 3.0            |           |             |                             |          |           |      |          |      |
| n-Propylbenzene             | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| sec-Butylbenzene            | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Styrene                     | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| tert-Butylbenzene           | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| Tetrachloroethene (PCE)     | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| trans-1,2-DCE               | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| trans-1,3-Dichloropropene   | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichlorobenzene      | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2,4-Trichlorobenzene      | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,1-Trichloroethane       | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,1,2-Trichloroethane       | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Trichloroethene (TCE)       | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Trichlorofluoromethane      | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| 1,2,3-Trichloropropane      | ND     | 2.0            |           |             |                             |          |           |      |          |      |
| Vinyl chloride              | ND     | 1.0            |           |             |                             |          |           |      |          |      |
| Xylenes, Total              | ND     | 1.5            |           |             |                             |          |           |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 8.5    |                | 10.00     |             | 84.6                        | 70       | 130       |      |          |      |
| Surr: 4-Bromofluorobenzene  | 9.2    |                | 10.00     |             | 92.4                        | 70       | 130       |      |          |      |
| Surr: Dibromofluoromethane  | 8.8    |                | 10.00     |             | 87.9                        | 70       | 130       |      |          |      |
| Surr: Toluene-d8            | 9.0    |                | 10.00     |             | 90.2                        | 70       | 130       |      |          |      |

|               |                   |                |           |             |                             |          |           |      |          |      |
|---------------|-------------------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID     | 100nglcs200nganne | SampType:      | LCS       | TestCode:   | EPA Method 8260B: VOLATILES |          |           |      |          |      |
| Client ID:    | LCSW              | Batch ID:      | R21325    | RunNo:      | 21325                       |          |           |      |          |      |
| Prep Date:    |                   | Analysis Date: | 9/19/2014 | SeqNo:      | 622336                      | Units:   | µg/L      |      |          |      |
| Analyte       | Result            | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene       | 18                | 1.0            | 20.00     | 0           | 90.3                        | 70       | 130       |      |          |      |
| Toluene       | 20                | 1.0            | 20.00     | 0           | 99.0                        | 80       | 120       |      |          |      |
| Chlorobenzene | 20                | 1.0            | 20.00     | 0           | 98.2                        | 70       | 130       |      |          |      |

### Qualifiers:

|   |                                                 |    |                                                    |
|---|-------------------------------------------------|----|----------------------------------------------------|
| * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
| E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
| O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
| R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
| S | Spike Recovery outside accepted recovery limits |    |                                                    |



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                   |     |                |             |      |          |           |                             |          |      |  |
|-----------------------------|-------------------|-----|----------------|-------------|------|----------|-----------|-----------------------------|----------|------|--|
| Sample ID                   | 100nglcs200nganne |     |                | SampType:   | LCS  |          | TestCode: | EPA Method 8260B: VOLATILES |          |      |  |
| Client ID:                  | LCSW              |     | Batch ID:      | R21325      |      | RunNo:   | 21325     |                             |          |      |  |
| Prep Date:                  |                   |     | Analysis Date: | 9/19/2014   |      | SeqNo:   | 622336    |                             | Units:   | µg/L |  |
| Analyte                     | Result            | PQL | SPK value      | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD                        | RPDLimit | Qual |  |
| 1,1-Dichloroethene          | 20                | 1.0 | 20.00          | 0           | 97.6 | 82.6     | 131       |                             |          |      |  |
| Trichloroethene (TCE)       | 18                | 1.0 | 20.00          | 0           | 91.2 | 70       | 130       |                             |          |      |  |
| Surr: 1,2-Dichloroethane-d4 | 9.1               |     | 10.00          |             | 90.8 | 70       | 130       |                             |          |      |  |
| Surr: 4-Bromofluorobenzene  | 8.6               |     | 10.00          |             | 85.9 | 70       | 130       |                             |          |      |  |
| Surr: Dibromofluoromethane  | 9.7               |     | 10.00          |             | 96.6 | 70       | 130       |                             |          |      |  |
| Surr: Toluene-d8            | 9.0               |     | 10.00          |             | 90.4 | 70       | 130       |                             |          |      |  |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |     |                          |             |                                           |          |             |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                   | mb-15440  |     | SampType: MBLK           |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                  | PBW       |     | Batch ID: 15440          |             | RunNo: 21434                              |          |             |      |          |      |
| Prep Date:                  | 9/23/2014 |     | Analysis Date: 9/24/2014 |             | SeqNo: 626587                             |          | Units: µg/L |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Acenaphthylene              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Aniline                     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Anthracene                  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Azobenzene                  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benz(a)anthracene           | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(a)pyrene              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(b)fluoranthene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(g,h,i)perylene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzo(k)fluoranthene        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Benzoic acid                | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| Benzyl alcohol              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-chloroethoxy)methane  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-chloroethyl)ether     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-chloroisopropyl)ether | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Bromophenyl phenyl ether  | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Butyl benzyl phthalate      | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Carbazole                   | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Chloro-3-methylphenol     | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Chloroaniline             | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2-Chloronaphthalene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2-Chlorophenol              | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4-Chlorophenyl phenyl ether | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Chrysene                    | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Di-n-butyl phthalate        | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Di-n-octyl phthalate        | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| Dibenz(a,h)anthracene       | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Dibenzofuran                | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 1,2-Dichlorobenzene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 1,3-Dichlorobenzene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 1,4-Dichlorobenzene         | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 3,3'-Dichlorobenzidine      | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Diethyl phthalate           | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| Dimethyl phthalate          | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 2,4-Dichlorophenol          | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| 2,4-Dimethylphenol          | ND        | 10  |                          |             |                                           |          |             |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND        | 20  |                          |             |                                           |          |             |      |          |      |
| 2,4-Dinitrophenol           | ND        | 20  |                          |             |                                           |          |             |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15440  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBW       | Batch ID:      | 15440     | RunNo:      | 21434                           |          |           |      |          |      |
| Prep Date:                 | 9/23/2014 | Analysis Date: | 9/24/2014 | SeqNo:      | 626587                          | Units:   | µg/L      |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 20             |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 10             |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 10             |           |             |                                 |          |           |      |          |      |
| N-Nitrosodimethylamine     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 20             |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 10             |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 10             |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 160       |                | 200.0     |             | 78.4                            | 12.1     | 85.8      |      |          |      |
| Surr: Phenol-d5            | 140       |                | 200.0     |             | 67.7                            | 17.7     | 65.8      |      |          | S    |
| Surr: 2,4,6-Tribromophenol | 150       |                | 200.0     |             | 75.5                            | 26       | 138       |      |          |      |
| Surr: Nitrobenzene-d5      | 87        |                | 100.0     |             | 87.5                            | 47.5     | 119       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 84        |                | 100.0     |             | 83.6                            | 48.1     | 106       |      |          |      |
| Surr: 4-Terphenyl-d14      | 88        |                | 100.0     |             | 87.9                            | 44       | 113       |      |          |      |

### Qualifiers:

|   |                                                 |    |                                                    |
|---|-------------------------------------------------|----|----------------------------------------------------|
| * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
| E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
| O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
| R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
| S | Spike Recovery outside accepted recovery limits |    |                                                    |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |     |                          |             |                                           |          |             |      |          |      |
|----------------------------|-----------|-----|--------------------------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | Ics-15440 |     | SampType: LCS            |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                 | LCSW      |     | Batch ID: 15440          |             | RunNo: 21434                              |          |             |      |          |      |
| Prep Date:                 | 9/23/2014 |     | Analysis Date: 9/24/2014 |             | SeqNo: 626588                             |          | Units: µg/L |      |          |      |
| Analyte                    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Acenaphthene               | 83        | 10  | 100.0                    | 0           | 83.1                                      | 47.9     | 114         |      |          |      |
| 4-Chloro-3-methylphenol    | 180       | 10  | 200.0                    | 0           | 88.5                                      | 51.7     | 122         |      |          |      |
| 2-Chlorophenol             | 170       | 10  | 200.0                    | 0           | 85.6                                      | 40.7     | 113         |      |          |      |
| 1,4-Dichlorobenzene        | 69        | 10  | 100.0                    | 0           | 69.4                                      | 39.6     | 99.9        |      |          |      |
| 2,4-Dinitrotoluene         | 79        | 10  | 100.0                    | 0           | 78.9                                      | 40.8     | 113         |      |          |      |
| N-Nitrosodi-n-propylamine  | 79        | 10  | 100.0                    | 0           | 78.8                                      | 51.2     | 111         |      |          |      |
| 4-Nitrophenol              | 140       | 10  | 200.0                    | 0           | 71.5                                      | 15.7     | 86.9        |      |          |      |
| Pentachlorophenol          | 120       | 20  | 200.0                    | 0           | 60.9                                      | 21.6     | 104         |      |          |      |
| Phenol                     | 150       | 10  | 200.0                    | 0           | 73.2                                      | 28.6     | 71.7        |      |          | S    |
| Pyrene                     | 84        | 10  | 100.0                    | 0           | 84.3                                      | 54.2     | 128         |      |          |      |
| 1,2,4-Trichlorobenzene     | 73        | 10  | 100.0                    | 0           | 73.1                                      | 40.9     | 101         |      |          |      |
| Surr: 2-Fluorophenol       | 150       |     | 200.0                    |             | 74.6                                      | 12.1     | 85.8        |      |          |      |
| Surr: Phenol-d5            | 130       |     | 200.0                    |             | 67.4                                      | 17.7     | 65.8        |      |          | S    |
| Surr: 2,4,6-Tribromophenol | 150       |     | 200.0                    |             | 73.1                                      | 26       | 138         |      |          |      |
| Surr: Nitrobenzene-d5      | 86        |     | 100.0                    |             | 86.1                                      | 47.5     | 119         |      |          |      |
| Surr: 2-Fluorobiphenyl     | 81        |     | 100.0                    |             | 80.9                                      | 48.1     | 106         |      |          |      |
| Surr: 4-Terphenyl-d14      | 82        |     | 100.0                    |             | 82.2                                      | 44       | 113         |      |          |      |

|                            |                |                          |           |             |                                           |          |             |      |          |      |
|----------------------------|----------------|--------------------------|-----------|-------------|-------------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | 1409961-001Bms | SampType: MS             |           |             | TestCode: EPA Method 8270C: Semivolatiles |          |             |      |          |      |
| Client ID:                 | SWMU 14 EB01   | Batch ID: 15440          |           |             | RunNo: 21434                              |          |             |      |          |      |
| Prep Date:                 | 9/23/2014      | Analysis Date: 9/24/2014 |           |             | SeqNo: 626609                             |          | Units: µg/L |      |          |      |
| Analyte                    | Result         | PQL                      | SPK value | SPK Ref Val | %REC                                      | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Acenaphthene               | 99             | 10                       | 100.0     | 0           | 98.6                                      | 52.5     | 94.5        |      |          | S    |
| 4-Chloro-3-methylphenol    | 210            | 10                       | 200.0     | 0           | 106                                       | 45       | 103         |      |          | S    |
| 2-Chlorophenol             | 210            | 10                       | 200.0     | 0           | 106                                       | 32.3     | 101         |      |          | S    |
| 1,4-Dichlorobenzene        | 81             | 10                       | 100.0     | 0           | 81.1                                      | 34.5     | 97.5        |      |          |      |
| 2,4-Dinitrotoluene         | 97             | 10                       | 100.0     | 0           | 97.0                                      | 20.1     | 123         |      |          |      |
| N-Nitrosodi-n-propylamine  | 97             | 10                       | 100.0     | 0           | 97.0                                      | 26.9     | 131         |      |          |      |
| 4-Nitrophenol              | 170            | 10                       | 200.0     | 0           | 83.3                                      | 11.6     | 55.4        |      |          | S    |
| Pentachlorophenol          | 130            | 20                       | 200.0     | 3.260       | 62.9                                      | 17.6     | 88.9        |      |          |      |
| Phenol                     | 160            | 10                       | 200.0     | 0           | 80.4                                      | 18.4     | 66.5        |      |          | S    |
| Pyrene                     | 99             | 10                       | 100.0     | 0           | 99.3                                      | 43.1     | 111         |      |          |      |
| 1,2,4-Trichlorobenzene     | 81             | 10                       | 100.0     | 0           | 81.1                                      | 38.8     | 95.6        |      |          |      |
| Surr: 2-Fluorophenol       | 160            |                          | 200.0     |             | 81.1                                      | 12.1     | 85.8        |      |          |      |
| Surr: Phenol-d5            | 150            |                          | 200.0     |             | 73.6                                      | 17.7     | 65.8        |      |          | S    |
| Surr: 2,4,6-Tribromophenol | 170            |                          | 200.0     |             | 83.6                                      | 26       | 138         |      |          |      |
| Surr: Nitrobenzene-d5      | 98             |                          | 100.0     |             | 98.1                                      | 47.5     | 119         |      |          |      |
| Surr: 2-Fluorobiphenyl     | 94             |                          | 100.0     |             | 93.6                                      | 48.1     | 106         |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                       |                |                |           |             |                                 |          |           |      |          |      |
|-----------------------|----------------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID             | 1409961-001Bms | SampType:      | MS        | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:            | SWMU 14 EB01   | Batch ID:      | 15440     | RunNo:      | 21434                           |          |           |      |          |      |
| Prep Date:            | 9/23/2014      | Analysis Date: | 9/24/2014 | SeqNo:      | 626609                          | Units:   | µg/L      |      |          |      |
| Analyte               | Result         | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Terphenyl-d14 | 98             |                | 100.0     |             | 98.2                            | 44       | 113       |      |          |      |

|                            |                 |                |           |             |                                 |          |           |       |          |      |
|----------------------------|-----------------|----------------|-----------|-------------|---------------------------------|----------|-----------|-------|----------|------|
| Sample ID                  | 1409961-001Bmsd | SampType:      | MSD       | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |       |          |      |
| Client ID:                 | SWMU 14 EB01    | Batch ID:      | 15440     | RunNo:      | 21434                           |          |           |       |          |      |
| Prep Date:                 | 9/23/2014       | Analysis Date: | 9/24/2014 | SeqNo:      | 626610                          | Units:   | µg/L      |       |          |      |
| Analyte                    | Result          | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD  | RPDLimit | Qual |
| Acenaphthene               | 96              | 10             | 100.0     | 0           | 95.7                            | 52.5     | 94.5      | 2.99  | 20       | S    |
| 4-Chloro-3-methylphenol    | 210             | 10             | 200.0     | 0           | 104                             | 45       | 103       | 1.47  | 20       | S    |
| 2-Chlorophenol             | 210             | 10             | 200.0     | 0           | 105                             | 32.3     | 101       | 0.398 | 20       | S    |
| 1,4-Dichlorobenzene        | 82              | 10             | 100.0     | 0           | 81.6                            | 34.5     | 97.5      | 0.688 | 20       |      |
| 2,4-Dinitrotoluene         | 88              | 10             | 100.0     | 0           | 88.1                            | 20.1     | 123       | 9.58  | 20       |      |
| N-Nitrosodi-n-propylamine  | 93              | 10             | 100.0     | 0           | 93.5                            | 26.9     | 131       | 3.74  | 20       |      |
| 4-Nitrophenol              | 140             | 10             | 200.0     | 0           | 70.2                            | 11.6     | 55.4      | 17.0  | 20       | S    |
| Pentachlorophenol          | 120             | 20             | 200.0     | 3.260       | 57.5                            | 17.6     | 88.9      | 8.77  | 20       |      |
| Phenol                     | 160             | 10             | 200.0     | 0           | 79.3                            | 18.4     | 66.5      | 1.28  | 20       | S    |
| Pyrene                     | 110             | 10             | 100.0     | 0           | 107                             | 43.1     | 111       | 7.84  | 20       |      |
| 1,2,4-Trichlorobenzene     | 84              | 10             | 100.0     | 0           | 83.9                            | 38.8     | 95.6      | 3.37  | 20       |      |
| Surr: 2-Fluorophenol       | 160             |                | 200.0     |             | 79.0                            | 12.1     | 85.8      | 0     | 0        |      |
| Surr: Phenol-d5            | 150             |                | 200.0     |             | 73.3                            | 17.7     | 65.8      | 0     | 0        | S    |
| Surr: 2,4,6-Tribromophenol | 170             |                | 200.0     |             | 83.7                            | 26       | 138       | 0     | 0        |      |
| Surr: Nitrobenzene-d5      | 98              |                | 100.0     |             | 97.8                            | 47.5     | 119       | 0     | 0        |      |
| Surr: 2-Fluorobiphenyl     | 91              |                | 100.0     |             | 91.2                            | 48.1     | 106       | 0     | 0        |      |
| Surr: 4-Terphenyl-d14      | 100             |                | 100.0     |             | 101                             | 44       | 113       | 0     | 0        |      |

### Qualifiers:

- |                                                   |                                                      |
|---------------------------------------------------|------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |                                                      |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |        |     |                          |             |                               |          |                   |      |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|-------------------------------|----------|-------------------|------|----------|------|
| Sample ID                   | mb-1   |     | SampType: MBLK           |             | TestCode: SM2320B: Alkalinity |          |                   |      |          |      |
| Client ID:                  | PBW    |     | Batch ID: R21338         |             | RunNo: 21338                  |          |                   |      |          |      |
| Prep Date:                  |        |     | Analysis Date: 9/19/2014 |             | SeqNo: 622910                 |          | Units: mg/L CaCO3 |      |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC                          | LowLimit | HighLimit         | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | ND     | 20  |                          |             |                               |          |                   |      |          |      |

|                             |        |     |                          |             |                               |          |                   |      |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|-------------------------------|----------|-------------------|------|----------|------|
| Sample ID                   | Ics-1  |     | SampType: LCS            |             | TestCode: SM2320B: Alkalinity |          |                   |      |          |      |
| Client ID:                  | LCSW   |     | Batch ID: R21338         |             | RunNo: 21338                  |          |                   |      |          |      |
| Prep Date:                  |        |     | Analysis Date: 9/19/2014 |             | SeqNo: 622911                 |          | Units: mg/L CaCO3 |      |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC                          | LowLimit | HighLimit         | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 80     | 20  | 80.00                    | 0           | 99.6                          | 90       | 110               |      |          |      |

|                             |        |     |                          |             |                               |          |                   |      |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|-------------------------------|----------|-------------------|------|----------|------|
| Sample ID                   | mb-2   |     | SampType: MBLK           |             | TestCode: SM2320B: Alkalinity |          |                   |      |          |      |
| Client ID:                  | PBW    |     | Batch ID: R21338         |             | RunNo: 21338                  |          |                   |      |          |      |
| Prep Date:                  |        |     | Analysis Date: 9/19/2014 |             | SeqNo: 622914                 |          | Units: mg/L CaCO3 |      |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC                          | LowLimit | HighLimit         | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | ND     | 20  |                          |             |                               |          |                   |      |          |      |

|                             |        |     |                          |             |                               |          |                   |      |          |      |
|-----------------------------|--------|-----|--------------------------|-------------|-------------------------------|----------|-------------------|------|----------|------|
| Sample ID                   | Ics-2  |     | SampType: LCS            |             | TestCode: SM2320B: Alkalinity |          |                   |      |          |      |
| Client ID:                  | LCSW   |     | Batch ID: R21338         |             | RunNo: 21338                  |          |                   |      |          |      |
| Prep Date:                  |        |     | Analysis Date: 9/19/2014 |             | SeqNo: 622915                 |          | Units: mg/L CaCO3 |      |          |      |
| Analyte                     | Result | PQL | SPK value                | SPK Ref Val | %REC                          | LowLimit | HighLimit         | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 81     | 20  | 80.00                    | 0           | 102                           | 90       | 110               |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1409961

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                        |           |      |                          |             |                                               |          |             |      |          |      |
|------------------------|-----------|------|--------------------------|-------------|-----------------------------------------------|----------|-------------|------|----------|------|
| Sample ID              | MB-15452  |      | SampType: MBLK           |             | TestCode: SM2540C MOD: Total Dissolved Solids |          |             |      |          |      |
| Client ID:             | PBW       |      | Batch ID: 15452          |             | RunNo: 21426                                  |          |             |      |          |      |
| Prep Date:             | 9/23/2014 |      | Analysis Date: 9/24/2014 |             | SeqNo: 626003                                 |          | Units: mg/L |      |          |      |
| Analyte                | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                          | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Total Dissolved Solids | ND        | 20.0 |                          |             |                                               |          |             |      |          |      |

|                        |           |      |                |             |      |           |                                     |      |             |      |  |
|------------------------|-----------|------|----------------|-------------|------|-----------|-------------------------------------|------|-------------|------|--|
| Sample ID              | LCS-15452 |      | SampType:      | LCS         |      | TestCode: | SM2540C MOD: Total Dissolved Solids |      |             |      |  |
| Client ID:             | LCSW      |      | Batch ID:      | 15452       |      | RunNo:    | 21426                               |      |             |      |  |
| Prep Date:             | 9/23/2014 |      | Analysis Date: | 9/24/2014   |      | SeqNo:    | 626004                              |      | Units: mg/L |      |  |
| Analyte                | Result    | PQL  | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                           | %RPD | RPDLimit    | Qual |  |
| Total Dissolved Solids | 1020      | 20.0 | 1000           | 0           | 102  | 80        | 120                                 |      |             |      |  |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1409961

RcptNo: 1

Received by/date:

09/19/14

Logged By: Anne Thorne

9/19/2014 7:00:00 AM

*Anne Thorne*

Completed By: Anne Thorne

9/19/2014

*Anne Thorne*

Reviewed By:

*mg*

09/19/14

## Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Courier

## Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of >0° C to 6.0°C

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☒

No ☐

No VOA Vials ☐

11. Were any sample containers received broken?

Yes ☐

No ☒

12. Does paperwork match bottle labels?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

Yes ☒

No ☐

(If no, notify customer for authorization.)

# of preserved bottles checked for pH: *1/2*

Adjusted? *2*

Checked by: *AT 09/19/14*

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified:

Date

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

## 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 3.3     | Good      | Yes         |         |           |           |







Metals and Cyanide for Soil and Groundwater Samples

TOTAL AND DISSOLVED FOR GW SAMPLES

| Analyte                    | Analytical Method              |
|----------------------------|--------------------------------|
| Antimony                   | SW-846 method 6010/6020        |
| Arsenic                    | SW-846 method 6010/6020        |
| Barium                     | SW-846 method 6010/6020        |
| Beryllium                  | SW-846 method 6010/6020        |
| Cadmium                    | SW-846 method 6010/6020        |
| Chromium                   | SW-846 method 6010/6020        |
| <del>Chromium VI</del>     | <del>SW-846 Method 3060A</del> |
| Cobalt                     | SW-846 method 6010/6020        |
| Cyanide                    | SW-846 method 335.4/335.2 mod  |
| Lead                       | SW-846 method 6010/6020        |
| <del>Tetraethyl lead</del> | <del>SW-846 method 8270C</del> |
| Mercury                    | SW-846 method 7470/7471        |
| Nickel                     | SW-846 method 6010/6020        |
| Selenium                   | SW-846 method 6010/6020        |
| Silver                     | SW-846 method 6010/6020        |
| Vanadium                   | SW-846 method 6010/6020        |
| Zinc                       | SW-846 method 6010/6020        |

# General Chemistry Parameters for Groundwater Samples

| Analyte                | Analytical Method                     |
|------------------------|---------------------------------------|
| Total Dissolved Solids | SM-2540C                              |
| Bicarbonate            | SM-2320B                              |
| Chloride               | EPA method 300.0                      |
| Sulfate                | EPA method 300.0                      |
| Calcium                | EPA method 6010/6020                  |
| Magnesium              | EPA method 6010/6020                  |
| Sodium                 | EPA method 6010/6020                  |
| Potassium              | EPA method 6010/6020                  |
| Manganese              | SW-846 method 6010/6020               |
| Nitrate/nitrite        | EPA method 300.0                      |
| Ferric/ferrous Iron    | SW-846 method 6010/6020 & SM 3500Fe2+ |



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 23, 2014

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1410011

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 10/1/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

## Case Narrative

WO#: 1410011  
Date: 10/23/2014

---

**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

---

Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-23 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 1:45:00 PM

**Lab ID:** 1410011-001

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                      | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 67     | 11       |      | mg/Kg-dry | 1  | 10/2/2014 3:03:49 PM | 15646                |
| Motor Oil Range Organics (MRO)                 | 140    | 55       |      | mg/Kg-dry | 1  | 10/2/2014 3:03:49 PM | 15646                |
| Surr: DNOP                                     | 98.4   | 57.9-140 |      | %REC      | 1  | 10/2/2014 3:03:49 PM | 15646                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                      | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.3      |      | mg/Kg-dry | 1  | 10/2/2014 5:38:57 PM | R21609               |
| Surr: BFB                                      | 93.0   | 80-120   |      | %REC      | 1  | 10/2/2014 5:38:57 PM | R21609               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| Percent Moisture                               | 10     | 1.0      |      | wt%       | 1  | 10/1/2014 2:18:00 PM | R21614               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                      | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.17   | 0.037    |      | mg/Kg-dry | 1  | 10/9/2014 1:39:43 PM | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                      | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Arsenic                                        | 3.1    | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Barium                                         | 150    | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Beryllium                                      | 0.36   | 0.17     |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Chromium                                       | 7.3    | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Cobalt                                         | 3.7    | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Lead                                           | 5.8    | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Nickel                                         | 5.6    | 0.55     |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Vanadium                                       | 21     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| Zinc                                           | 74     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:46:15 PM | 15701                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                      | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |
| Acenaphthylene                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |
| Aniline                                        | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |
| Anthracene                                     | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |
| Azobenzene                                     | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |
| Benz(a)anthracene                              | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |
| Benzo(a)pyrene                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |
| Benzo(b)fluoranthene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |
| Benzo(g,h,i)perylene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |
| Benzo(k)fluoranthene                           | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |
| Benzyl alcohol                                 | ND     | 0.45     |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-23 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 1:45:00 PM

**Lab ID:** 1410011-001

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Bis(2-chloroethyl)ether                | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 4-Bromophenyl phenyl ether             | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Butyl benzyl phthalate                 | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Carbazole                              | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 2-Chloronaphthalene                    | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 2-Chlorophenol                         | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Chrysene                               | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Di-n-octyl phthalate                   | ND     | 0.89 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Dibenz(a,h)anthracene                  | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Dibenzofuran                           | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 1,2-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 1,3-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 1,4-Dichlorobenzene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Diethyl phthalate                      | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Dimethyl phthalate                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 2,4-Dichlorophenol                     | ND     | 0.89 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 2,4-Dimethylphenol                     | ND     | 0.67 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Fluoranthene                           | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Fluorene                               | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Hexachlorobenzene                      | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Hexachlorobutadiene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Hexachlorocyclopentadiene              | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Hexachloroethane                       | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 1-Methylnaphthalene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |
| 2-Methylnaphthalene                    | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 1:47:55 PM | 15682        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-23 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 1:45:00 PM

**Lab ID:** 1410011-001

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL        | Qual | Units         | DF | Date Analyzed         | Batch |
|----------------------------------------|--------|-----------|------|---------------|----|-----------------------|-------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      | Analyst: JDC  |    |                       |       |
| 2-Methylphenol                         | ND     | 1.1       |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| 3+4-Methylphenol                       | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| N-Nitrosodi-n-propylamine              | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| N-Nitrosodiphenylamine                 | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Naphthalene                            | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| 2-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| 3-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| 4-Nitroaniline                         | ND     | 0.89      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Nitrobenzene                           | ND     | 1.1       |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| 2-Nitrophenol                          | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| 4-Nitrophenol                          | ND     | 0.56      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Pentachlorophenol                      | ND     | 0.89      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Phenanthrene                           | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Phenol                                 | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Pyrene                                 | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Pyridine                               | ND     | 1.1       |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| 2,4,5-Trichlorophenol                  | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| 2,4,6-Trichlorophenol                  | ND     | 0.45      |      | mg/Kg-dry     | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Surr: 2-Fluorophenol                   | 79.7   | 21-111    |      | %REC          | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Surr: Phenol-d5                        | 78.6   | 23.1-117  |      | %REC          | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Surr: 2,4,6-Tribromophenol             | 51.6   | 22.7-88.9 |      | %REC          | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Surr: Nitrobenzene-d5                  | 89.8   | 24.5-126  |      | %REC          | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Surr: 2-Fluorobiphenyl                 | 87.3   | 21.2-129  |      | %REC          | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| Surr: 4-Terphenyl-d14                  | 93.3   | 39.4-107  |      | %REC          | 1  | 10/3/2014 1:47:55 PM  | 15682 |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      | Analyst: cadg |    |                       |       |
| Benzene                                | ND     | 0.00165   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| Toluene                                | ND     | 0.00165   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| Ethylbenzene                           | ND     | 0.00165   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| Xylenes, Total                         | ND     | 0.00165   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00165   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00165   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00165   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00165   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00165   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| Naphthalene                            | ND     | 0.00165   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| 1-Methylnaphthalene                    | ND     | 0.00330   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| 2-Methylnaphthalene                    | ND     | 0.00330   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |
| Acetone                                | 0.0123 | 0.00825   |      | mg/Kg-dry     | 1  | 10/3/2014 11:35:23 AM | 15691 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-23 (0-0.5')

Project: GROUP 9

Collection Date: 9/29/2014 1:45:00 PM

Lab ID: 1410011-001

Matrix: SOIL

Received Date: 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|-----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                       | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Bromodichloromethane                   | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Bromoform                              | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Bromomethane                           | ND     | 0.00248 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 2-Butanone                             | ND     | 0.00825 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Carbon tetrachloride                   | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Chlorobenzene                          | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Chloroethane                           | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Chloroform                             | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Chloromethane                          | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 2-Chlorotoluene                        | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Carbon disulfide                       | ND     | 0.00825 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 4-Chlorotoluene                        | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| cis-1,2-DCE                            | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| cis-1,3-Dichloropropene                | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Dibromochloromethane                   | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Dibromomethane                         | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,2-Dichlorobenzene                    | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,3-Dichlorobenzene                    | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,4-Dichlorobenzene                    | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Dichlorodifluoromethane                | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,1-Dichloroethane                     | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,1-Dichloroethene                     | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,2-Dichloropropane                    | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,3-Dichloropropane                    | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 2,2-Dichloropropane                    | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,1-Dichloropropene                    | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Hexachlorobutadiene                    | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Isopropylbenzene                       | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 4-Isopropyltoluene                     | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Methylene chloride                     | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| n-Butylbenzene                         | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 2-Hexanone                             | ND     | 0.00825 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| n-Propylbenzene                        | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| sec-Butylbenzene                       | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Styrene                                | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 4-Methyl-2-pentanone                   | ND     | 0.00825 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| tert-Butylbenzene                      | ND     | 0.00165 |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 5 of 50 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-23 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 1:45:00 PM

**Lab ID:** 1410011-001

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|-----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                       | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Tetrachloroethene (PCE)                | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| trans-1,2-DCE                          | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| trans-1,3-Dichloropropene              | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,1,1-Trichloroethane                  | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,1,2-Trichloroethane                  | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Trichloroethene (TCE)                  | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Trichlorofluoromethane                 | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| 1,2,3-Trichloropropane                 | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Vinyl chloride                         | ND     | 0.00165  |      | mg/Kg-dry | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Surr: 1,2-Dichloroethane-d4            | 107    | 70-130   |      | %REC      | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Surr: 4-Bromofluorobenzene             | 102    | 65.3-135 |      | %REC      | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Surr: Dibromofluoromethane             | 95.2   | 70-130   |      | %REC      | 1  | 10/3/2014 11:35:23 AM | 15691         |
| Surr: Toluene-d8                       | 99.2   | 70-130   |      | %REC      | 1  | 10/3/2014 11:35:23 AM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 6 of 50 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-24 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 2:10:00 PM

**Lab ID:** 1410011-002

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                      | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 21     | 11       |      | mg/Kg-dry | 1  | 10/2/2014 3:34:33 PM | 15646                |
| Motor Oil Range Organics (MRO)                 | ND     | 54       |      | mg/Kg-dry | 1  | 10/2/2014 3:34:33 PM | 15646                |
| Surr: DNOP                                     | 94.5   | 57.9-140 |      | %REC      | 1  | 10/2/2014 3:34:33 PM | 15646                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                      | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.2      |      | mg/Kg-dry | 1  | 10/2/2014 7:04:50 PM | R21609               |
| Surr: BFB                                      | 90.4   | 80-120   |      | %REC      | 1  | 10/2/2014 7:04:50 PM | R21609               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                      | Analyst: <b>cadg</b> |
| Percent Moisture                               | 8.6    | 1.0      |      | wt%       | 1  | 10/1/2014 2:18:00 PM | R21614               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                      | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.068  | 0.035    |      | mg/Kg-dry | 1  | 10/9/2014 1:41:29 PM | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                      | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 2:40:26 PM | 15701                |
| Arsenic                                        | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:47:31 PM | 15701                |
| Barium                                         | 80     | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 2:40:26 PM | 15701                |
| Beryllium                                      | 0.20   | 0.17     |      | mg/Kg-dry | 1  | 10/4/2014 1:47:31 PM | 15701                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:47:31 PM | 15701                |
| Chromium                                       | 3.4    | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 1:47:31 PM | 15701                |
| Cobalt                                         | 2.0    | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 1:47:31 PM | 15701                |
| Lead                                           | 2.7    | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 1:47:31 PM | 15701                |
| Nickel                                         | 2.5    | 0.55     |      | mg/Kg-dry | 1  | 10/4/2014 1:47:31 PM | 15701                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:47:31 PM | 15701                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 1:47:31 PM | 15701                |
| Vanadium                                       | 15     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:47:31 PM | 15701                |
| Zinc                                           | 38     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:47:31 PM | 15701                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                      | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |
| Benzoic acid                                   | ND     | 0.55     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-24 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 2:10:00 PM

**Lab ID:** 1410011-002

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 4-Chloro-3-methylphenol                | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 4-Chloroaniline                        | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 2-Chloronaphthalene                    | ND     | 0.27 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Di-n-butyl phthalate                   | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Di-n-octyl phthalate                   | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.27 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 2,4-Dichlorophenol                     | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 2,4-Dimethylphenol                     | ND     | 0.33 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 2,4-Dinitrophenol                      | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 2,4-Dinitrotoluene                     | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 2,6-Dinitrotoluene                     | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| Isophorone                             | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 8 of 50 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-24 (0-0.5')

Project: GROUP 9

Collection Date: 9/29/2014 2:10:00 PM

Lab ID: 1410011-002

Matrix: SOIL

Received Date: 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND     | 0.55      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| 3+4-Methylphenol                       | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| N-Nitrosodi-n-propylamine              | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| N-Nitrosodiphenylamine                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Naphthalene                            | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| 2-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| 3-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| 4-Nitroaniline                         | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Nitrobenzene                           | ND     | 0.55      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| 2-Nitrophenol                          | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| 4-Nitrophenol                          | ND     | 0.27      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Pentachlorophenol                      | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Phenanthrene                           | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Phenol                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Pyrene                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Pyridine                               | ND     | 0.55      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| 2,4,5-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| 2,4,6-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Surr: 2-Fluorophenol                   | 58.5   | 21-111    |      | %REC      | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Surr: Phenol-d5                        | 59.5   | 23.1-117  |      | %REC      | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Surr: 2,4,6-Tribromophenol             | 24.4   | 22.7-88.9 |      | %REC      | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Surr: Nitrobenzene-d5                  | 65.7   | 24.5-126  |      | %REC      | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Surr: 2-Fluorobiphenyl                 | 61.4   | 21.2-129  |      | %REC      | 1  | 10/3/2014 3:12:52 PM | 15682         |
| Surr: 4-Terphenyl-d14                  | 61.8   | 39.4-107  |      | %REC      | 1  | 10/3/2014 3:12:52 PM | 15682         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | ND     | 0.00176   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Toluene                                | ND     | 0.00176   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Ethylbenzene                           | ND     | 0.00176   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Xylenes, Total                         | ND     | 0.00176   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00176   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00176   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00176   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00176   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00176   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Naphthalene                            | ND     | 0.00176   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1-Methylnaphthalene                    | ND     | 0.00353   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 2-Methylnaphthalene                    | ND     | 0.00353   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Acetone                                | 0.0173 | 0.00881   |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|             |   |                                                 |    |                                                    |              |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 9 of 50 |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-24 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 2:10:00 PM

**Lab ID:** 1410011-002

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Bromodichloromethane                   | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Bromoform                              | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Bromomethane                           | ND     | 0.00264 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 2-Butanone                             | ND     | 0.00881 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Carbon tetrachloride                   | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Chlorobenzene                          | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Chloroethane                           | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Chloroform                             | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Chloromethane                          | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 2-Chlorotoluene                        | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Carbon disulfide                       | ND     | 0.00881 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 4-Chlorotoluene                        | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| cis-1,2-DCE                            | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| cis-1,3-Dichloropropene                | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Dibromochloromethane                   | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Dibromomethane                         | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,2-Dichlorobenzene                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,3-Dichlorobenzene                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,4-Dichlorobenzene                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Dichlorodifluoromethane                | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,1-Dichloroethane                     | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,1-Dichloroethene                     | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,2-Dichloropropane                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,3-Dichloropropane                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 2,2-Dichloropropane                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 1,1-Dichloropropene                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Hexachlorobutadiene                    | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Isopropylbenzene                       | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 4-Isopropyltoluene                     | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Methylene chloride                     | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| n-Butylbenzene                         | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 2-Hexanone                             | ND     | 0.00881 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| n-Propylbenzene                        | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| sec-Butylbenzene                       | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| Styrene                                | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| 4-Methyl-2-pentanone                   | ND     | 0.00881 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |
| tert-Butylbenzene                      | ND     | 0.00176 |      | mg/Kg-dry | 1  | 10/3/2014 1:01:41 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-24 (0-0.5')

Project: GROUP 9

Collection Date: 9/29/2014 2:10:00 PM

Lab ID: 1410011-002

Matrix: SOIL

Received Date: 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL       | Qual | Units         | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|----------|------|---------------|----|----------------------|-------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      | Analyst: cadg |    |                      |       |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| Tetrachloroethene (PCE)                | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| trans-1,2-DCE                          | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| trans-1,3-Dichloropropene              | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| 1,1,1-Trichloroethane                  | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| 1,1,2-Trichloroethane                  | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| Trichloroethene (TCE)                  | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| Trichlorofluoromethane                 | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| 1,2,3-Trichloropropane                 | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| Vinyl chloride                         | ND     | 0.00176  |      | mg/Kg-dry     | 1  | 10/3/2014 1:01:41 PM | 15691 |
| Surr: 1,2-Dichloroethane-d4            | 112    | 70-130   |      | %REC          | 1  | 10/3/2014 1:01:41 PM | 15691 |
| Surr: 4-Bromofluorobenzene             | 96.9   | 65.3-135 |      | %REC          | 1  | 10/3/2014 1:01:41 PM | 15691 |
| Surr: Dibromofluoromethane             | 98.5   | 70-130   |      | %REC          | 1  | 10/3/2014 1:01:41 PM | 15691 |
| Surr: Toluene-d8                       | 99.6   | 70-130   |      | %REC          | 1  | 10/3/2014 1:01:41 PM | 15691 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|             |   |                                                 |    |                                                    |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-25 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 3:00:00 PM

**Lab ID:** 1410011-003

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 57     | 11       |      | mg/Kg-dry | 1  | 10/3/2014 12:03:08 PM | 15646                |
| Motor Oil Range Organics (MRO)                 | 62     | 53       |      | mg/Kg-dry | 1  | 10/3/2014 12:03:08 PM | 15646                |
| Surr: DNOP                                     | 95.1   | 57.9-140 |      | %REC      | 1  | 10/3/2014 12:03:08 PM | 15646                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 4.0      |      | mg/Kg-dry | 1  | 10/2/2014 9:56:18 PM  | R21609               |
| Surr: BFB                                      | 89.1   | 80-120   |      | %REC      | 1  | 10/2/2014 9:56:18 PM  | R21609               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 6.2    | 1.0      |      | wt%       | 1  | 10/1/2014 2:18:00 PM  | R21614               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.64   | 0.18     |      | mg/Kg-dry | 5  | 10/9/2014 2:38:30 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Arsenic                                        | 4.3    | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Barium                                         | 140    | 0.10     |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Beryllium                                      | 0.28   | 0.15     |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Cadmium                                        | ND     | 0.10     |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Chromium                                       | 5.6    | 0.31     |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Cobalt                                         | 3.4    | 0.31     |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Lead                                           | 7.5    | 0.26     |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Nickel                                         | 5.3    | 0.51     |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Vanadium                                       | 18     | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| Zinc                                           | 60     | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:51:35 PM  | 15701                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |
| Acenaphthylene                                 | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |
| Aniline                                        | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |
| Anthracene                                     | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |
| Azobenzene                                     | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |
| Benz(a)anthracene                              | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |
| Benzo(a)pyrene                                 | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |
| Benzo(b)fluoranthene                           | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |
| Benzo(g,h,i)perylene                           | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |
| Benzo(k)fluoranthene                           | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |
| Benzoic acid                                   | ND     | 5.3      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |
| Benzyl alcohol                                 | ND     | 2.1      |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM  | 15682                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-25 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 3:00:00 PM

**Lab ID:** 1410011-003

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Bis(2-chloroethyl)ether                | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.3 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 4-Bromophenyl phenyl ether             | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Butyl benzyl phthalate                 | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Carbazole                              | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 4-Chloro-3-methylphenol                | ND     | 5.3 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 4-Chloroaniline                        | ND     | 5.3 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 2-Chloronaphthalene                    | ND     | 2.7 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 2-Chlorophenol                         | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Chrysene                               | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Di-n-butyl phthalate                   | ND     | 5.3 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Di-n-octyl phthalate                   | ND     | 4.2 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Dibenz(a,h)anthracene                  | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Dibenzofuran                           | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 1,2-Dichlorobenzene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 1,3-Dichlorobenzene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 1,4-Dichlorobenzene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.7 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Diethyl phthalate                      | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Dimethyl phthalate                     | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 2,4-Dichlorophenol                     | ND     | 4.2 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 2,4-Dimethylphenol                     | ND     | 3.2 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.3 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 2,4-Dinitrophenol                      | ND     | 5.3 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 2,4-Dinitrotoluene                     | ND     | 5.3 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 2,6-Dinitrotoluene                     | ND     | 5.3 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Fluoranthene                           | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Fluorene                               | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Hexachlorobenzene                      | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Hexachlorobutadiene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Hexachlorocyclopentadiene              | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Hexachloroethane                       | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| Isophorone                             | ND     | 5.3 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 1-Methylnaphthalene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |
| 2-Methylnaphthalene                    | ND     | 2.1 |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-25 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 3:00:00 PM

**Lab ID:** 1410011-003

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND     | 5.3       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| 3+4-Methylphenol                       | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| N-Nitrosodi-n-propylamine              | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| N-Nitrosodiphenylamine                 | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Naphthalene                            | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| 2-Nitroaniline                         | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| 3-Nitroaniline                         | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| 4-Nitroaniline                         | ND     | 4.2       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Nitrobenzene                           | ND     | 5.3       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| 2-Nitrophenol                          | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| 4-Nitrophenol                          | ND     | 2.7       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Pentachlorophenol                      | ND     | 4.2       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Phenanthrene                           | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Phenol                                 | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Pyrene                                 | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Pyridine                               | ND     | 5.3       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| 1,2,4-Trichlorobenzene                 | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| 2,4,5-Trichlorophenol                  | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| 2,4,6-Trichlorophenol                  | ND     | 2.1       |      | mg/Kg-dry | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Surr: 2-Fluorophenol                   | 0      | 21-111    | S    | %REC      | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Surr: Phenol-d5                        | 0      | 23.1-117  | S    | %REC      | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Surr: 2,4,6-Tribromophenol             | 0      | 22.7-88.9 | S    | %REC      | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Surr: Nitrobenzene-d5                  | 0      | 24.5-126  | S    | %REC      | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Surr: 2-Fluorobiphenyl                 | 0      | 21.2-129  | S    | %REC      | 1  | 10/3/2014 3:41:18 PM | 15682         |
| Surr: 4-Terphenyl-d14                  | 0      | 39.4-107  | S    | %REC      | 1  | 10/3/2014 3:41:18 PM | 15682         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | ND     | 0.00239   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Toluene                                | ND     | 0.00239   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Ethylbenzene                           | ND     | 0.00239   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Xylenes, Total                         | ND     | 0.00239   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00239   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00239   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00239   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00239   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00239   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Naphthalene                            | ND     | 0.00239   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1-Methylnaphthalene                    | ND     | 0.00479   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 2-Methylnaphthalene                    | ND     | 0.00479   |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Acetone                                | 0.0174 | 0.0120    |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-25 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 3:00:00 PM

**Lab ID:** 1410011-003

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Bromodichloromethane                   | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Bromoform                              | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Bromomethane                           | ND     | 0.00359 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 2-Butanone                             | ND     | 0.0120  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Carbon tetrachloride                   | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Chlorobenzene                          | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Chloroethane                           | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Chloroform                             | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Chloromethane                          | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 2-Chlorotoluene                        | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Carbon disulfide                       | ND     | 0.0120  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 4-Chlorotoluene                        | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| cis-1,2-DCE                            | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| cis-1,3-Dichloropropene                | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Dibromochloromethane                   | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Dibromomethane                         | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,2-Dichlorobenzene                    | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,3-Dichlorobenzene                    | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,4-Dichlorobenzene                    | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Dichlorodifluoromethane                | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,1-Dichloroethane                     | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,1-Dichloroethene                     | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,2-Dichloropropane                    | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,3-Dichloropropane                    | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 2,2-Dichloropropane                    | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,1-Dichloropropene                    | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Hexachlorobutadiene                    | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Isopropylbenzene                       | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 4-Isopropyltoluene                     | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Methylene chloride                     | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| n-Butylbenzene                         | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 2-Hexanone                             | ND     | 0.0120  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| n-Propylbenzene                        | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| sec-Butylbenzene                       | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Styrene                                | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 4-Methyl-2-pentanone                   | ND     | 0.0120  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| tert-Butylbenzene                      | ND     | 0.00239 |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-25 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 3:00:00 PM

**Lab ID:** 1410011-003

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Tetrachloroethene (PCE)                | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| trans-1,2-DCE                          | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| trans-1,3-Dichloropropene              | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,1,1-Trichloroethane                  | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,1,2-Trichloroethane                  | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Trichloroethene (TCE)                  | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Trichlorofluoromethane                 | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| 1,2,3-Trichloropropane                 | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Vinyl chloride                         | ND     | 0.00239  |      | mg/Kg-dry | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Surr: 1,2-Dichloroethane-d4            | 129    | 70-130   |      | %REC      | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Surr: 4-Bromofluorobenzene             | 125    | 65.3-135 |      | %REC      | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Surr: Dibromofluoromethane             | 113    | 70-130   |      | %REC      | 1  | 10/3/2014 1:30:28 PM | 15691         |
| Surr: Toluene-d8                       | 114    | 70-130   |      | %REC      | 1  | 10/3/2014 1:30:28 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |               |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 16 of 50 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-26 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 3:25:00 PM

**Lab ID:** 1410011-004

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 10/2/2014 4:35:55 PM  | 15646                |
| Motor Oil Range Organics (MRO)                 | ND     | 53       |      | mg/Kg-dry | 1  | 10/2/2014 4:35:55 PM  | 15646                |
| Surr: DNOP                                     | 94.0   | 57.9-140 |      | %REC      | 1  | 10/2/2014 4:35:55 PM  | 15646                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.5      |      | mg/Kg-dry | 1  | 10/2/2014 10:24:51 PM | R21609               |
| Surr: BFB                                      | 90.9   | 80-120   |      | %REC      | 1  | 10/2/2014 10:24:51 PM | R21609               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 6.3    | 1.0      |      | wt%       | 1  | 10/1/2014 2:18:00 PM  | R21614               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.046  | 0.037    |      | mg/Kg-dry | 1  | 10/9/2014 1:46:53 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Arsenic                                        | 3.0    | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Barium                                         | 180    | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Beryllium                                      | 0.31   | 0.16     |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Cadmium                                        | ND     | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Chromium                                       | 5.5    | 0.32     |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Cobalt                                         | 4.1    | 0.32     |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Lead                                           | 4.7    | 0.26     |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Nickel                                         | 5.0    | 0.53     |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Selenium                                       | ND     | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Silver                                         | ND     | 0.26     |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Vanadium                                       | 21     | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| Zinc                                           | 30     | 2.6      |      | mg/Kg-dry | 1  | 10/4/2014 1:56:45 PM  | 15701                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |
| Acenaphthylene                                 | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |
| Aniline                                        | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |
| Anthracene                                     | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |
| Azobenzene                                     | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |
| Benz(a)anthracene                              | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |
| Benzo(a)pyrene                                 | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |
| Benzo(b)fluoranthene                           | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |
| Benzo(g,h,i)perylene                           | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |
| Benzo(k)fluoranthene                           | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |
| Benzoic acid                                   | ND     | 1.1      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |
| Benzyl alcohol                                 | ND     | 0.43     |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM  | 15682                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-26 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 3:25:00 PM

**Lab ID:** 1410011-004

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Bis(2-chloroethyl)ether                | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Bis(2-ethylhexyl)phthalate             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 4-Bromophenyl phenyl ether             | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Butyl benzyl phthalate                 | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Carbazole                              | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 4-Chloro-3-methylphenol                | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 4-Chloroaniline                        | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 2-Chloronaphthalene                    | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 2-Chlorophenol                         | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Chrysene                               | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Di-n-butyl phthalate                   | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Di-n-octyl phthalate                   | ND     | 0.85 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Dibenz(a,h)anthracene                  | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Dibenzofuran                           | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 1,2-Dichlorobenzene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 1,3-Dichlorobenzene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 1,4-Dichlorobenzene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.53 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Diethyl phthalate                      | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Dimethyl phthalate                     | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 2,4-Dichlorophenol                     | ND     | 0.85 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 2,4-Dimethylphenol                     | ND     | 0.64 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 4,6-Dinitro-2-methylphenol             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 2,4-Dinitrophenol                      | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 2,4-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 2,6-Dinitrotoluene                     | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Fluoranthene                           | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Fluorene                               | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Hexachlorobenzene                      | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Hexachlorobutadiene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Hexachlorocyclopentadiene              | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Hexachloroethane                       | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| Isophorone                             | ND     | 1.1  |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 1-Methylnaphthalene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |
| 2-Methylnaphthalene                    | ND     | 0.43 |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-26 (0-0.5')

Project: GROUP 9

Collection Date: 9/29/2014 3:25:00 PM

Lab ID: 1410011-004

Matrix: SOIL

Received Date: 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| 3+4-Methylphenol                       | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| N-Nitrosodi-n-propylamine              | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| N-Nitrosodiphenylamine                 | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Naphthalene                            | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| 2-Nitroaniline                         | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| 3-Nitroaniline                         | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| 4-Nitroaniline                         | ND     | 0.85      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Nitrobenzene                           | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| 2-Nitrophenol                          | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| 4-Nitrophenol                          | ND     | 0.53      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Pentachlorophenol                      | ND     | 0.85      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Phenanthrene                           | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Phenol                                 | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Pyrene                                 | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Pyridine                               | ND     | 1.1       |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| 2,4,5-Trichlorophenol                  | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| 2,4,6-Trichlorophenol                  | ND     | 0.43      |      | mg/Kg-dry | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Surr: 2-Fluorophenol                   | 49.0   | 21-111    |      | %REC      | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Surr: Phenol-d5                        | 54.5   | 23.1-117  |      | %REC      | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Surr: 2,4,6-Tribromophenol             | 8.69   | 22.7-88.9 | S    | %REC      | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Surr: Nitrobenzene-d5                  | 58.0   | 24.5-126  |      | %REC      | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Surr: 2-Fluorobiphenyl                 | 58.8   | 21.2-129  |      | %REC      | 1  | 10/3/2014 4:09:51 PM | 15682         |
| Surr: 4-Terphenyl-d14                  | 61.4   | 39.4-107  |      | %REC      | 1  | 10/3/2014 4:09:51 PM | 15682         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | ND     | 0.00170   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Toluene                                | ND     | 0.00170   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Ethylbenzene                           | ND     | 0.00170   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Xylenes, Total                         | ND     | 0.00170   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00170   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00170   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00170   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00170   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00170   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Naphthalene                            | ND     | 0.00170   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1-Methylnaphthalene                    | ND     | 0.00340   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 2-Methylnaphthalene                    | ND     | 0.00340   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Acetone                                | 0.0329 | 0.00850   |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-26 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 3:25:00 PM

**Lab ID:** 1410011-004

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Bromodichloromethane                   | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Bromoform                              | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Bromomethane                           | ND     | 0.00255 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 2-Butanone                             | 0.0303 | 0.00850 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Carbon tetrachloride                   | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Chlorobenzene                          | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Chloroethane                           | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Chloroform                             | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Chloromethane                          | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 2-Chlorotoluene                        | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Carbon disulfide                       | ND     | 0.00850 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 4-Chlorotoluene                        | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| cis-1,2-DCE                            | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| cis-1,3-Dichloropropene                | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Dibromochloromethane                   | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Dibromomethane                         | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,2-Dichlorobenzene                    | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,3-Dichlorobenzene                    | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,4-Dichlorobenzene                    | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Dichlorodifluoromethane                | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,1-Dichloroethane                     | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,1-Dichloroethene                     | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,2-Dichloropropane                    | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,3-Dichloropropane                    | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 2,2-Dichloropropane                    | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,1-Dichloropropene                    | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Hexachlorobutadiene                    | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Isopropylbenzene                       | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 4-Isopropyltoluene                     | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Methylene chloride                     | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| n-Butylbenzene                         | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 2-Hexanone                             | ND     | 0.00850 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| n-Propylbenzene                        | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| sec-Butylbenzene                       | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Styrene                                | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 4-Methyl-2-pentanone                   | ND     | 0.00850 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| tert-Butylbenzene                      | ND     | 0.00170 |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-26 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 3:25:00 PM

**Lab ID:** 1410011-004

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Tetrachloroethene (PCE)                | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| trans-1,2-DCE                          | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| trans-1,3-Dichloropropene              | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,1,1-Trichloroethane                  | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,1,2-Trichloroethane                  | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Trichloroethene (TCE)                  | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Trichlorofluoromethane                 | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| 1,2,3-Trichloropropane                 | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Vinyl chloride                         | ND     | 0.00170  |      | mg/Kg-dry | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Surr: 1,2-Dichloroethane-d4            | 117    | 70-130   |      | %REC      | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Surr: 4-Bromofluorobenzene             | 110    | 65.3-135 |      | %REC      | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Surr: Dibromofluoromethane             | 102    | 70-130   |      | %REC      | 1  | 10/3/2014 1:59:11 PM | 15691         |
| Surr: Toluene-d8                       | 100    | 70-130   |      | %REC      | 1  | 10/3/2014 1:59:11 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1410011**

Date Reported: **10/23/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-20 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 4:00:00 PM

**Lab ID:** 1410011-005

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 10/2/2014 5:06:47 PM  | 15646                |
| Motor Oil Range Organics (MRO)                 | ND     | 55       |      | mg/Kg-dry | 1  | 10/2/2014 5:06:47 PM  | 15646                |
| Surr: DNOP                                     | 97.8   | 57.9-140 |      | %REC      | 1  | 10/2/2014 5:06:47 PM  | 15646                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/2/2014 10:53:25 PM | R21609               |
| Surr: BFB                                      | 90.0   | 80-120   |      | %REC      | 1  | 10/2/2014 10:53:25 PM | R21609               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 11     | 1.0      |      | wt%       | 1  | 10/1/2014 2:18:00 PM  | R21614               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.65   | 0.17     |      | mg/Kg-dry | 5  | 10/9/2014 2:40:40 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Arsenic                                        | 3.6    | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Barium                                         | 160    | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Beryllium                                      | 0.37   | 0.17     |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Cadmium                                        | 0.13   | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Chromium                                       | 12     | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Cobalt                                         | 5.4    | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Lead                                           | 2.9    | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Nickel                                         | 14     | 0.55     |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Vanadium                                       | 20     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| Zinc                                           | 140    | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 1:58:02 PM  | 15701                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |
| Benzoic acid                                   | ND     | 0.56     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM  | 15682                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-20 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 4:00:00 PM

**Lab ID:** 1410011-005

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 4-Chloro-3-methylphenol                | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 4-Chloroaniline                        | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 2-Chloronaphthalene                    | ND     | 0.28 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Di-n-butyl phthalate                   | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Di-n-octyl phthalate                   | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.28 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 2,4-Dichlorophenol                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 2,4-Dinitrophenol                      | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 2,4-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 2,6-Dinitrotoluene                     | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| Isophorone                             | ND     | 0.56 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 1-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |
| 2-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-20 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 4:00:00 PM

**Lab ID:** 1410011-005

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result  | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|---------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |         |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND      | 0.56      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| 3+4-Methylphenol                       | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| N-Nitrosodi-n-propylamine              | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| N-Nitrosodiphenylamine                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Naphthalene                            | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| 2-Nitroaniline                         | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| 3-Nitroaniline                         | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| 4-Nitroaniline                         | ND      | 0.45      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Nitrobenzene                           | ND      | 0.56      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| 2-Nitrophenol                          | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| 4-Nitrophenol                          | ND      | 0.28      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Pentachlorophenol                      | ND      | 0.45      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Phenanthrene                           | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Phenol                                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Pyrene                                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Pyridine                               | ND      | 0.56      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| 1,2,4-Trichlorobenzene                 | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| 2,4,5-Trichlorophenol                  | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| 2,4,6-Trichlorophenol                  | ND      | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Surr: 2-Fluorophenol                   | 43.7    | 21-111    |      | %REC      | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Surr: Phenol-d5                        | 48.1    | 23.1-117  |      | %REC      | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Surr: 2,4,6-Tribromophenol             | 20.6    | 22.7-88.9 | S    | %REC      | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Surr: Nitrobenzene-d5                  | 52.5    | 24.5-126  |      | %REC      | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Surr: 2-Fluorobiphenyl                 | 48.0    | 21.2-129  |      | %REC      | 1  | 10/3/2014 4:38:27 PM | 15682         |
| Surr: 4-Terphenyl-d14                  | 59.1    | 39.4-107  |      | %REC      | 1  | 10/3/2014 4:38:27 PM | 15682         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |         |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | 0.00215 | 0.00163   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Toluene                                | 0.0106  | 0.00163   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Ethylbenzene                           | 0.00179 | 0.00163   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Xylenes, Total                         | 0.0108  | 0.00163   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Methyl tert-butyl ether (MTBE)         | ND      | 0.00163   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,2,4-Trimethylbenzene                 | 0.00298 | 0.00163   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,3,5-Trimethylbenzene                 | ND      | 0.00163   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,2-Dichloroethane (EDC)               | ND      | 0.00163   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,2-Dibromoethane (EDB)                | ND      | 0.00163   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Naphthalene                            | ND      | 0.00163   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1-Methylnaphthalene                    | ND      | 0.00327   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 2-Methylnaphthalene                    | ND      | 0.00327   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Acetone                                | 0.0124  | 0.00817   |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-20 (0-0.5')

Project: GROUP 9

Collection Date: 9/29/2014 4:00:00 PM

Lab ID: 1410011-005

Matrix: SOIL

Received Date: 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Bromodichloromethane                   | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Bromoform                              | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Bromomethane                           | ND     | 0.00245 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 2-Butanone                             | ND     | 0.00817 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Carbon tetrachloride                   | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Chlorobenzene                          | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Chloroethane                           | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Chloroform                             | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Chloromethane                          | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 2-Chlorotoluene                        | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Carbon disulfide                       | ND     | 0.00817 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 4-Chlorotoluene                        | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| cis-1,2-DCE                            | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| cis-1,3-Dichloropropene                | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Dibromochloromethane                   | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Dibromomethane                         | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,2-Dichlorobenzene                    | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,3-Dichlorobenzene                    | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,4-Dichlorobenzene                    | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Dichlorodifluoromethane                | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,1-Dichloroethane                     | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,1-Dichloroethene                     | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,2-Dichloropropane                    | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,3-Dichloropropane                    | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 2,2-Dichloropropane                    | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,1-Dichloropropene                    | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Hexachlorobutadiene                    | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Isopropylbenzene                       | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 4-Isopropyltoluene                     | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Methylene chloride                     | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| n-Butylbenzene                         | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 2-Hexanone                             | ND     | 0.00817 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| n-Propylbenzene                        | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| sec-Butylbenzene                       | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Styrene                                | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 4-Methyl-2-pentanone                   | ND     | 0.00817 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| tert-Butylbenzene                      | ND     | 0.00163 |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-20 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 4:00:00 PM

**Lab ID:** 1410011-005

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Tetrachloroethene (PCE)                | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| trans-1,2-DCE                          | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| trans-1,3-Dichloropropene              | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,1,1-Trichloroethane                  | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,1,2-Trichloroethane                  | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Trichloroethene (TCE)                  | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Trichlorofluoromethane                 | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| 1,2,3-Trichloropropane                 | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Vinyl chloride                         | ND     | 0.00163  |      | mg/Kg-dry | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Surr: 1,2-Dichloroethane-d4            | 107    | 70-130   |      | %REC      | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Surr: 4-Bromofluorobenzene             | 95.3   | 65.3-135 |      | %REC      | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Surr: Dibromofluoromethane             | 96.2   | 70-130   |      | %REC      | 1  | 10/3/2014 2:27:54 PM | 15691         |
| Surr: Toluene-d8                       | 97.9   | 70-130   |      | %REC      | 1  | 10/3/2014 2:27:54 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1410011**

Date Reported: **10/23/2014**

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-21 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 4:30:00 PM

**Lab ID:** 1410011-006

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 10/2/2014 5:37:22 PM  | 15646                |
| Motor Oil Range Organics (MRO)                 | ND     | 55       |      | mg/Kg-dry | 1  | 10/2/2014 5:37:22 PM  | 15646                |
| Surr: DNOP                                     | 101    | 57.9-140 |      | %REC      | 1  | 10/2/2014 5:37:22 PM  | 15646                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.2      |      | mg/Kg-dry | 1  | 10/2/2014 11:21:55 PM | R21609               |
| Surr: BFB                                      | 94.6   | 80-120   |      | %REC      | 1  | 10/2/2014 11:21:55 PM | R21609               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 9.0    | 1.0      |      | wt%       | 1  | 10/1/2014 2:18:00 PM  | R21614               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 1.1    | 0.34     |      | mg/Kg-dry | 10 | 10/9/2014 2:42:57 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| Arsenic                                        | 7.5    | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| Barium                                         | 180    | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| Beryllium                                      | 0.36   | 0.16     |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| Cadmium                                        | 0.46   | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| Chromium                                       | 23     | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| Cobalt                                         | 7.4    | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| Lead                                           | 16     | 0.27     |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| Nickel                                         | 670    | 2.7      |      | mg/Kg-dry | 5  | 10/4/2014 2:49:54 PM  | 15701                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| Vanadium                                       | 23     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| Zinc                                           | 250    | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 1:59:17 PM  | 15701                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |
| Acenaphthylene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |
| Aniline                                        | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |
| Anthracene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |
| Azobenzene                                     | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |
| Benz(a)anthracene                              | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |
| Benzo(a)pyrene                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |
| Benzo(b)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |
| Benzo(g,h,i)perylene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |
| Benzo(k)fluoranthene                           | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |
| Benzoic acid                                   | ND     | 0.55     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |
| Benzyl alcohol                                 | ND     | 0.22     |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM  | 15682                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-21 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 4:30:00 PM

**Lab ID:** 1410011-006

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Bis(2-chloroethyl)ether                | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 4-Bromophenyl phenyl ether             | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Butyl benzyl phthalate                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Carbazole                              | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 4-Chloro-3-methylphenol                | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 4-Chloroaniline                        | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 2-Chloronaphthalene                    | ND     | 0.27 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 2-Chlorophenol                         | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Chrysene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Di-n-butyl phthalate                   | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Di-n-octyl phthalate                   | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Dibenz(a,h)anthracene                  | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Dibenzofuran                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 1,2-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 1,3-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 1,4-Dichlorobenzene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.27 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Diethyl phthalate                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Dimethyl phthalate                     | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 2,4-Dichlorophenol                     | ND     | 0.44 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 2,4-Dimethylphenol                     | ND     | 0.33 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 2,4-Dinitrophenol                      | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 2,4-Dinitrotoluene                     | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 2,6-Dinitrotoluene                     | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Fluoranthene                           | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Fluorene                               | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Hexachlorobenzene                      | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Hexachlorobutadiene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Hexachlorocyclopentadiene              | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Hexachloroethane                       | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| Isophorone                             | ND     | 0.55 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 1-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |
| 2-Methylnaphthalene                    | ND     | 0.22 |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-21 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 4:30:00 PM

**Lab ID:** 1410011-006

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND     | 0.55      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| 3+4-Methylphenol                       | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| N-Nitrosodi-n-propylamine              | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| N-Nitrosodiphenylamine                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Naphthalene                            | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| 2-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| 3-Nitroaniline                         | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| 4-Nitroaniline                         | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Nitrobenzene                           | ND     | 0.55      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| 2-Nitrophenol                          | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| 4-Nitrophenol                          | ND     | 0.27      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Pentachlorophenol                      | ND     | 0.44      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Phenanthrene                           | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Phenol                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Pyrene                                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Pyridine                               | ND     | 0.55      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| 2,4,5-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| 2,4,6-Trichlorophenol                  | ND     | 0.22      |      | mg/Kg-dry | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Surr: 2-Fluorophenol                   | 62.2   | 21-111    |      | %REC      | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Surr: Phenol-d5                        | 66.6   | 23.1-117  |      | %REC      | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Surr: 2,4,6-Tribromophenol             | 42.1   | 22.7-88.9 |      | %REC      | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Surr: Nitrobenzene-d5                  | 70.6   | 24.5-126  |      | %REC      | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Surr: 2-Fluorobiphenyl                 | 69.7   | 21.2-129  |      | %REC      | 1  | 10/3/2014 5:06:52 PM | 15682         |
| Surr: 4-Terphenyl-d14                  | 79.1   | 39.4-107  |      | %REC      | 1  | 10/3/2014 5:06:52 PM | 15682         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | ND     | 0.00167   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Toluene                                | ND     | 0.00167   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Ethylbenzene                           | ND     | 0.00167   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Xylenes, Total                         | ND     | 0.00167   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00167   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00167   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00167   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00167   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00167   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Naphthalene                            | ND     | 0.00167   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1-Methylnaphthalene                    | ND     | 0.00335   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 2-Methylnaphthalene                    | ND     | 0.00335   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Acetone                                | ND     | 0.00837   |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-21 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 4:30:00 PM

**Lab ID:** 1410011-006

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Bromodichloromethane                   | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Bromoform                              | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Bromomethane                           | ND     | 0.00251 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 2-Butanone                             | ND     | 0.00837 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Carbon tetrachloride                   | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Chlorobenzene                          | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Chloroethane                           | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Chloroform                             | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Chloromethane                          | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 2-Chlorotoluene                        | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Carbon disulfide                       | ND     | 0.00837 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 4-Chlorotoluene                        | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| cis-1,2-DCE                            | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| cis-1,3-Dichloropropene                | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Dibromochloromethane                   | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Dibromomethane                         | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,2-Dichlorobenzene                    | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,3-Dichlorobenzene                    | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,4-Dichlorobenzene                    | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Dichlorodifluoromethane                | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,1-Dichloroethane                     | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,1-Dichloroethene                     | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,2-Dichloropropane                    | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,3-Dichloropropane                    | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 2,2-Dichloropropane                    | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,1-Dichloropropene                    | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Hexachlorobutadiene                    | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Isopropylbenzene                       | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 4-Isopropyltoluene                     | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Methylene chloride                     | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| n-Butylbenzene                         | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 2-Hexanone                             | ND     | 0.00837 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| n-Propylbenzene                        | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| sec-Butylbenzene                       | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Styrene                                | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 4-Methyl-2-pentanone                   | ND     | 0.00837 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| tert-Butylbenzene                      | ND     | 0.00167 |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-21 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 4:30:00 PM

**Lab ID:** 1410011-006

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL       | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|----------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      |           |    |                      | Analyst: cadg |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Tetrachloroethene (PCE)                | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| trans-1,2-DCE                          | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| trans-1,3-Dichloropropene              | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,1,1-Trichloroethane                  | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,1,2-Trichloroethane                  | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Trichloroethene (TCE)                  | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Trichlorofluoromethane                 | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| 1,2,3-Trichloropropane                 | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Vinyl chloride                         | ND     | 0.00167  |      | mg/Kg-dry | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Surr: 1,2-Dichloroethane-d4            | 111    | 70-130   |      | %REC      | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Surr: 4-Bromofluorobenzene             | 108    | 65.3-135 |      | %REC      | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Surr: Dibromofluoromethane             | 99.2   | 70-130   |      | %REC      | 1  | 10/3/2014 2:56:39 PM | 15691         |
| Surr: Toluene-d8                       | 97.4   | 70-130   |      | %REC      | 1  | 10/3/2014 2:56:39 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-22 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 5:00:00 PM

**Lab ID:** 1410011-007

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | ND     | 11       |      | mg/Kg-dry | 1  | 10/2/2014 6:08:09 PM  | 15646                |
| Motor Oil Range Organics (MRO)                 | ND     | 57       |      | mg/Kg-dry | 1  | 10/2/2014 6:08:09 PM  | 15646                |
| Surr: DNOP                                     | 102    | 57.9-140 |      | %REC      | 1  | 10/2/2014 6:08:09 PM  | 15646                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.7      |      | mg/Kg-dry | 1  | 10/2/2014 11:50:30 PM | R21609               |
| Surr: BFB                                      | 91.1   | 80-120   |      | %REC      | 1  | 10/2/2014 11:50:30 PM | R21609               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 11     | 1.0      |      | wt%       | 1  | 10/1/2014 2:18:00 PM  | R21614               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.75   | 0.36     |      | mg/Kg-dry | 10 | 10/9/2014 2:44:48 PM  | 15805                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Arsenic                                        | 10     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Barium                                         | 170    | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Beryllium                                      | 0.53   | 0.16     |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Cadmium                                        | 0.30   | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Chromium                                       | 21     | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Cobalt                                         | 7.2    | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Lead                                           | 22     | 0.27     |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Nickel                                         | 19     | 0.55     |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Selenium                                       | ND     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Silver                                         | ND     | 0.27     |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Vanadium                                       | 37     | 2.7      |      | mg/Kg-dry | 1  | 10/4/2014 2:00:34 PM  | 15701                |
| Zinc                                           | 360    | 5.5      |      | mg/Kg-dry | 2  | 10/4/2014 2:51:10 PM  | 15701                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |
| Acenaphthylene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |
| Aniline                                        | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |
| Anthracene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |
| Azobenzene                                     | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |
| Benz(a)anthracene                              | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |
| Benzo(a)pyrene                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |
| Benzo(b)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |
| Benzo(g,h,i)perylene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |
| Benzo(k)fluoranthene                           | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |
| Benzoic acid                                   | ND     | 0.57     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |
| Benzyl alcohol                                 | ND     | 0.23     |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM  | 15682                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-22 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 5:00:00 PM

**Lab ID:** 1410011-007

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL   | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|------|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |      |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Bis(2-chloroethyl)ether                | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Bis(2-chloroisopropyl)ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Bis(2-ethylhexyl)phthalate             | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 4-Bromophenyl phenyl ether             | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Butyl benzyl phthalate                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Carbazole                              | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 4-Chloro-3-methylphenol                | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 4-Chloroaniline                        | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 2-Chloronaphthalene                    | ND     | 0.28 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 2-Chlorophenol                         | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 4-Chlorophenyl phenyl ether            | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Chrysene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Di-n-butyl phthalate                   | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Di-n-octyl phthalate                   | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Dibenz(a,h)anthracene                  | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Dibenzofuran                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 1,2-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 1,3-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 1,4-Dichlorobenzene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 3,3'-Dichlorobenzidine                 | ND     | 0.28 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Diethyl phthalate                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Dimethyl phthalate                     | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 2,4-Dichlorophenol                     | ND     | 0.45 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 2,4-Dimethylphenol                     | ND     | 0.34 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 4,6-Dinitro-2-methylphenol             | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 2,4-Dinitrophenol                      | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 2,4-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 2,6-Dinitrotoluene                     | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Fluoranthene                           | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Fluorene                               | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Hexachlorobenzene                      | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Hexachlorobutadiene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Hexachlorocyclopentadiene              | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Hexachloroethane                       | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| Isophorone                             | ND     | 0.57 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 1-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |
| 2-Methylnaphthalene                    | ND     | 0.23 |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-22 (0-0.5')

Project: GROUP 9

Collection Date: 9/29/2014 5:00:00 PM

Lab ID: 1410011-007

Matrix: SOIL

Received Date: 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL        | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|-----------|------|-----------|----|----------------------|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |           |    |                      | Analyst: JDC  |
| 2-Methylphenol                         | ND     | 0.57      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| 3+4-Methylphenol                       | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| N-Nitrosodi-n-propylamine              | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| N-Nitrosodiphenylamine                 | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Naphthalene                            | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| 2-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| 3-Nitroaniline                         | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| 4-Nitroaniline                         | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Nitrobenzene                           | ND     | 0.57      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| 2-Nitrophenol                          | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| 4-Nitrophenol                          | ND     | 0.28      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Pentachlorophenol                      | ND     | 0.45      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Phenanthrene                           | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Phenol                                 | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Pyrene                                 | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Pyridine                               | ND     | 0.57      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| 1,2,4-Trichlorobenzene                 | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| 2,4,5-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| 2,4,6-Trichlorophenol                  | ND     | 0.23      |      | mg/Kg-dry | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Surr: 2-Fluorophenol                   | 51.6   | 21-111    |      | %REC      | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Surr: Phenol-d5                        | 56.2   | 23.1-117  |      | %REC      | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Surr: 2,4,6-Tribromophenol             | 23.8   | 22.7-88.9 |      | %REC      | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Surr: Nitrobenzene-d5                  | 57.5   | 24.5-126  |      | %REC      | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Surr: 2-Fluorobiphenyl                 | 60.2   | 21.2-129  |      | %REC      | 1  | 10/3/2014 5:35:23 PM | 15682         |
| Surr: 4-Terphenyl-d14                  | 61.8   | 39.4-107  |      | %REC      | 1  | 10/3/2014 5:35:23 PM | 15682         |
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |           |      |           |    |                      | Analyst: cadg |
| Benzene                                | ND     | 0.00180   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Toluene                                | ND     | 0.00180   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Ethylbenzene                           | ND     | 0.00180   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Xylenes, Total                         | ND     | 0.00180   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Methyl tert-butyl ether (MTBE)         | ND     | 0.00180   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,2,4-Trimethylbenzene                 | ND     | 0.00180   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,3,5-Trimethylbenzene                 | ND     | 0.00180   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,2-Dichloroethane (EDC)               | ND     | 0.00180   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,2-Dibromoethane (EDB)                | ND     | 0.00180   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Naphthalene                            | ND     | 0.00180   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1-Methylnaphthalene                    | ND     | 0.00361   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 2-Methylnaphthalene                    | ND     | 0.00361   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Acetone                                | 0.0255 | 0.00902   |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-22 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/29/2014 5:00:00 PM

**Lab ID:** 1410011-007

**Matrix:** SOIL

**Received Date:** 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL      | Qual | Units     | DF | Date Analyzed        | Batch         |
|----------------------------------------|--------|---------|------|-----------|----|----------------------|---------------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |         |      |           |    |                      | Analyst: cadg |
| Bromobenzene                           | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Bromodichloromethane                   | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Bromoform                              | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Bromomethane                           | ND     | 0.00271 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 2-Butanone                             | ND     | 0.00902 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Carbon tetrachloride                   | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Chlorobenzene                          | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Chloroethane                           | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Chloroform                             | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Chloromethane                          | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 2-Chlorotoluene                        | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Carbon disulfide                       | ND     | 0.00902 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 4-Chlorotoluene                        | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| cis-1,2-DCE                            | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| cis-1,3-Dichloropropene                | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,2-Dibromo-3-chloropropane            | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Dibromochloromethane                   | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Dibromomethane                         | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,2-Dichlorobenzene                    | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,3-Dichlorobenzene                    | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,4-Dichlorobenzene                    | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Dichlorodifluoromethane                | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,1-Dichloroethane                     | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,1-Dichloroethene                     | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,2-Dichloropropane                    | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,3-Dichloropropane                    | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 2,2-Dichloropropane                    | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 1,1-Dichloropropene                    | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Hexachlorobutadiene                    | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Isopropylbenzene                       | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 4-Isopropyltoluene                     | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Methylene chloride                     | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| n-Butylbenzene                         | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 2-Hexanone                             | ND     | 0.00902 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| n-Propylbenzene                        | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| sec-Butylbenzene                       | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| Styrene                                | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| 4-Methyl-2-pentanone                   | ND     | 0.00902 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |
| tert-Butylbenzene                      | ND     | 0.00180 |      | mg/Kg-dry | 1  | 10/3/2014 3:25:30 PM | 15691         |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410011

Date Reported: 10/23/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-22 (0-0.5')

Project: GROUP 9

Collection Date: 9/29/2014 5:00:00 PM

Lab ID: 1410011-007

Matrix: SOIL

Received Date: 10/1/2014 7:30:00 AM

| Analyses                               | Result | RL       | Qual | Units         | DF | Date Analyzed        | Batch |
|----------------------------------------|--------|----------|------|---------------|----|----------------------|-------|
| <b>METHOD 8260B/5035LOW: VOLATILES</b> |        |          |      | Analyst: cadg |    |                      |       |
| 1,1,1,2-Tetrachloroethane              | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| 1,1,2,2-Tetrachloroethane              | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| Tetrachloroethene (PCE)                | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| trans-1,2-DCE                          | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| trans-1,3-Dichloropropene              | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| 1,2,3-Trichlorobenzene                 | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| 1,2,4-Trichlorobenzene                 | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| 1,1,1-Trichloroethane                  | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| 1,1,2-Trichloroethane                  | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| Trichloroethene (TCE)                  | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| Trichlorofluoromethane                 | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| 1,2,3-Trichloropropane                 | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| Vinyl chloride                         | ND     | 0.00180  |      | mg/Kg-dry     | 1  | 10/3/2014 3:25:30 PM | 15691 |
| Surr: 1,2-Dichloroethane-d4            | 103    | 70-130   |      | %REC          | 1  | 10/3/2014 3:25:30 PM | 15691 |
| Surr: 4-Bromofluorobenzene             | 97.4   | 65.3-135 |      | %REC          | 1  | 10/3/2014 3:25:30 PM | 15691 |
| Surr: Dibromofluoromethane             | 92.8   | 70-130   |      | %REC          | 1  | 10/3/2014 3:25:30 PM | 15691 |
| Surr: Toluene-d8                       | 101    | 70-130   |      | %REC          | 1  | 10/3/2014 3:25:30 PM | 15691 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|             |   |                                                 |    |                                                    |               |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|---------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 36 of 50 |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |               |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |               |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |               |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |               |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |               |

# Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 141002026  
**Project Name:** 1410011

## Analytical Results Report

|                  |                                   |                 |           |                    |           |           |           |
|------------------|-----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 141002026-001                     | Sampling Date   | 9/29/2014 | Date/Time Received | 10/2/2014 | 12:30 PM  |           |
| Client Sample ID | 1410011-001C / SWMU 13-23 (0-0.5) |                 |           | Sampling Time      | 1:45 PM   |           |           |
| Matrix           | Soil                              | Sample Location |           |                    |           |           |           |
| Comments         |                                   |                 |           |                    |           |           |           |
| Parameter        | Result                            | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                                | mg/Kg           | 0.259     | 10/13/2014         | CRW       | EPA 335.4 |           |
| %moisture        | 9.8                               | Percent         |           | 10/6/2014          | KJS       | %moisture |           |

|                  |                                   |                 |           |                    |           |           |           |
|------------------|-----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 141002026-002                     | Sampling Date   | 9/29/2014 | Date/Time Received | 10/2/2014 | 12:30 PM  |           |
| Client Sample ID | 1410011-002C / SWMU 13-24 (0-0.5) |                 |           | Sampling Time      | 2:10 PM   |           |           |
| Matrix           | Soil                              | Sample Location |           |                    |           |           |           |
| Comments         |                                   |                 |           |                    |           |           |           |
| Parameter        | Result                            | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                                | mg/Kg           | 0.238     | 10/13/2014         | CRW       | EPA 335.4 |           |
| %moisture        | 8                                 | Percent         |           | 10/6/2014          | KJS       | %moisture |           |

|                  |                                   |                 |           |                    |           |           |           |
|------------------|-----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 141002026-003                     | Sampling Date   | 9/29/2014 | Date/Time Received | 10/2/2014 | 12:30 PM  |           |
| Client Sample ID | 1410011-003C / SWMU 13-25 (0-0.5) |                 |           | Sampling Time      | 3:00 PM   |           |           |
| Matrix           | Soil                              | Sample Location |           |                    |           |           |           |
| Comments         |                                   |                 |           |                    |           |           |           |
| Parameter        | Result                            | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                                | mg/Kg           | 0.245     | 10/13/2014         | CRW       | EPA 335.4 |           |
| %moisture        | 5.7                               | Percent         |           | 10/6/2014          | KJS       | %moisture |           |

|                  |                                   |                 |           |                    |           |           |           |
|------------------|-----------------------------------|-----------------|-----------|--------------------|-----------|-----------|-----------|
| Sample Number    | 141002026-004                     | Sampling Date   | 9/29/2014 | Date/Time Received | 10/2/2014 | 12:30 PM  |           |
| Client Sample ID | 1410011-004C / SWMU 13-26 (0-0.5) |                 |           | Sampling Time      | 3:25 PM   |           |           |
| Matrix           | Soil                              | Sample Location |           |                    |           |           |           |
| Comments         |                                   |                 |           |                    |           |           |           |
| Parameter        | Result                            | Units           | PQL       | Analysis Date      | Analyst   | Method    | Qualifier |
| Cyanide          | ND                                | mg/Kg           | 0.236     | 10/13/2014         | CRW       | EPA 335.4 |           |
| %moisture        | 5.5                               | Percent         |           | 10/6/2014          | KJS       | %moisture |           |

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:Cert0028; NM:ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP):E871099

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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 141002026  
**Project Name:** 1410011

## Analytical Results Report

**Sample Number** 141002026-005 **Sampling Date** 9/29/2014 **Date/Time Received** 10/2/2014 12:30 PM  
**Client Sample ID** 1410011-005C / SWMU 13-20 (0-0.5) **Sampling Time** 4:00 PM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL  | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.23 | 10/13/2014    | CRW     | EPA 335.4 |           |
| %moisture | 9.6    | Percent |      | 10/6/2014     | KJS     | %moisture |           |

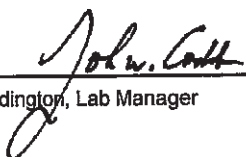
**Sample Number** 141002026-006 **Sampling Date** 9/29/2014 **Date/Time Received** 10/2/2014 12:30 PM  
**Client Sample ID** 1410011-006C / SWMU 13-21 (0-0.5) **Sampling Time** 5:00 PM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.253 | 10/13/2014    | CRW     | EPA 335.4 |           |
| %moisture | 9.6    | Percent |       | 10/6/2014     | KJS     | %moisture |           |

**Sample Number** 141002026-007 **Sampling Date** 9/29/2014 **Date/Time Received** 10/2/2014 12:30 PM  
**Client Sample ID** 1410011-007C / SWMU 13-22 (0-0.5) **Sampling Time** 5:00 PM  
**Matrix** Soil **Sample Location**  
**Comments**

| Parameter | Result | Units   | PQL   | Analysis Date | Analyst | Method    | Qualifier |
|-----------|--------|---------|-------|---------------|---------|-----------|-----------|
| Cyanide   | ND     | mg/Kg   | 0.257 | 10/13/2014    | CRW     | EPA 335.4 |           |
| %moisture | 10.4   | Percent |       | 10/6/2014     | KJS     | %moisture |           |

Authorized Signature

  
John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level  
ND Not Detected  
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.  
The results reported relate only to the samples indicated.  
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C585  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871089

Monday, October 20, 2014

Page 2 of 2

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**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

**Batch #:** 141002026  
**Project Name:** 1410011

## Analytical Results Report Quality Control Data

### Lab Control Sample

| Parameter | LCS Result | Units | LCS Spike | %Rec  | AR %Rec | Prep Date  | Analysis Date |
|-----------|------------|-------|-----------|-------|---------|------------|---------------|
| Cyanide   | 0.510      | mg/kg | 0.5       | 102.0 | 90-110  | 10/13/2014 | 10/13/2014    |

### Matrix Spike

| Sample Number | Parameter | Sample Result | MS Result | Units | MS Spike | %Rec  | AR %Rec | Prep Date  | Analysis Date |
|---------------|-----------|---------------|-----------|-------|----------|-------|---------|------------|---------------|
| 141003046-004 | Cyanide   | ND            | 12.3      | mg/kg | 12.2     | 100.8 | 90-110  | 10/13/2014 | 10/13/2014    |

### Matrix Spike Duplicate

| Parameter | MSD Result | Units | MSD Spike | %Rec  | %RPD | AR %RPD | Prep Date  | Analysis Date |
|-----------|------------|-------|-----------|-------|------|---------|------------|---------------|
| Cyanide   | 12.5       | mg/kg | 12.2      | 102.5 | 1.6  | 0-25    | 10/13/2014 | 10/13/2014    |

### Method Blank

| Parameter | Result | Units | PQL | Prep Date  | Analysis Date |
|-----------|--------|-------|-----|------------|---------------|
| Cyanide   | ND     | mg/Kg | 0.5 | 10/13/2014 | 10/13/2014    |

AR Acceptable Range  
ND Not Detected  
PQL Practical Quantitation Limit  
RPD Relative Percentage Difference

### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595  
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Monday, October 20, 2014

Page 1 of 1

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |     |                          |             |                                                   |          |              |      |          |      |
|--------------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | MB-15646  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                     | PBS       |     | Batch ID: 15646          |             | RunNo: 21573                                      |          |              |      |          |      |
| Prep Date:                     | 10/1/2014 |     | Analysis Date: 10/2/2014 |             | SeqNo: 633394                                     |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10  |                          |             |                                                   |          |              |      |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50  |                          |             |                                                   |          |              |      |          |      |
| Surr: DNOP                     | 8.5       |     | 10.00                    |             | 84.5                                              | 57.9     | 140          |      |          |      |

|                             |           |     |                          |             |                                                   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | LCS-15646 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 15646          |             | RunNo: 21573                                      |          |              |      |          |      |
| Prep Date:                  | 10/1/2014 |     | Analysis Date: 10/2/2014 |             | SeqNo: 633396                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC                                              | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 63        | 10  | 50.00                    | 0           | 125                                               | 68.6     | 130          |      |          |      |
| Surr: DNOP                  | 5.2       |     | 5.000                    |             | 104                                               | 57.9     | 140          |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID <b>MB-15650 MK</b>  | SampType: <b>MBLK</b>           |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|-------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21609</b>         |     | RunNo: <b>21609</b>                               |             |                     |          |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>10/2/2014</b> |     | SeqNo: <b>634279</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |                                                   |             |                     |          |           |      |          |      |
| Surr: BFB                     | 900                             |     | 1000                                              |             | 90.0                | 80       | 120       |      |          |      |

| Sample ID <b>LCS-15650 MK</b> | SampType: <b>LCS</b>            |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|-------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>        | Batch ID: <b>R21609</b>         |     | RunNo: <b>21609</b>                               |             |                     |          |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>10/2/2014</b> |     | SeqNo: <b>634280</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26                              | 5.0 | 25.00                                             | 0           | 104                 | 65.8     | 139       |      |          |      |
| Surr: BFB                     | 980                             |     | 1000                                              |             | 98.2                | 80       | 120       |      |          |      |

| Sample ID <b>B26</b>          | SampType: <b>MBLK</b>           |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|-------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBS</b>         | Batch ID: <b>R21609</b>         |     | RunNo: <b>21609</b>                               |             |                     |          |           |      |          |      |
| Prep Date:                    | Analysis Date: <b>10/2/2014</b> |     | SeqNo: <b>634288</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                       | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND                              | 5.0 |                                                   |             |                     |          |           |      |          |      |
| Surr: BFB                     | 900                             |     | 1000                                              |             | 89.8                | 80       | 120       |      |          |      |

| Sample ID <b>2.5UG GRO LCS</b> | SampType: <b>LCS</b>            |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                     |          |           |      |          |      |
|--------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|---------------------|----------|-----------|------|----------|------|
| Client ID: <b>LCSS</b>         | Batch ID: <b>R21609</b>         |     | RunNo: <b>21609</b>                               |             |                     |          |           |      |          |      |
| Prep Date:                     | Analysis Date: <b>10/2/2014</b> |     | SeqNo: <b>634289</b>                              |             | Units: <b>mg/Kg</b> |          |           |      |          |      |
| Analyte                        | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)  | 25                              | 5.0 | 25.00                                             | 0           | 100                 | 65.8     | 139       |      |          |      |
| Surr: BFB                      | 970                             |     | 1000                                              |             | 97.2                | 80       | 120       |      |          |      |

| Sample ID <b>1410011-001AMS</b>       | SampType: <b>MS</b>             |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                         |          |           |      |          |      |
|---------------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|-------------------------|----------|-----------|------|----------|------|
| Client ID: <b>SWMU 13-23 (0-0.5')</b> | Batch ID: <b>R21609</b>         |     | RunNo: <b>21609</b>                               |             |                         |          |           |      |          |      |
| Prep Date:                            | Analysis Date: <b>10/2/2014</b> |     | SeqNo: <b>634291</b>                              |             | Units: <b>mg/Kg-dry</b> |          |           |      |          |      |
| Analyte                               | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                    | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO)         | 19                              | 3.3 | 16.29                                             | 0           | 118                     | 71.8     | 132       |      |          |      |
| Surr: BFB                             | 670                             |     | 651.7                                             |             | 102                     | 80       | 120       |      |          |      |

| Sample ID <b>1410011-001AMSD</b>      | SampType: <b>MSD</b>            |     | TestCode: <b>EPA Method 8015D: Gasoline Range</b> |             |                         |          |           |      |          |      |
|---------------------------------------|---------------------------------|-----|---------------------------------------------------|-------------|-------------------------|----------|-----------|------|----------|------|
| Client ID: <b>SWMU 13-23 (0-0.5')</b> | Batch ID: <b>R21609</b>         |     | RunNo: <b>21609</b>                               |             |                         |          |           |      |          |      |
| Prep Date:                            | Analysis Date: <b>10/2/2014</b> |     | SeqNo: <b>634292</b>                              |             | Units: <b>mg/Kg-dry</b> |          |           |      |          |      |
| Analyte                               | Result                          | PQL | SPK value                                         | SPK Ref Val | %REC                    | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

### Qualifiers:

- |                                                   |                                                      |
|---------------------------------------------------|------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |                                                      |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                               |                     |                |           |             |                                  |          |           |      |          |      |
|-------------------------------|---------------------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID                     | 1410011-001AMSD     | SampType:      | MSD       | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID:                    | SWMU 13-23 (0-0.5') | Batch ID:      | R21609    | RunNo:      | 21609                            |          |           |      |          |      |
| Prep Date:                    |                     | Analysis Date: | 10/2/2014 | SeqNo:      | 634292                           | Units:   | mg/Kg-dry |      |          |      |
| Analyte                       | Result              | PQL            | SPK value | SPK Ref Val | %REC                             | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 18                  | 3.3            | 16.29     | 0           | 107                              | 71.8     | 132       | 9.27 | 20       |      |
| Surr: BFB                     | 660                 |                | 651.7     |             | 102                              | 80       | 120       | 0    | 0        |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                                |           |         |                          |             |                                           |          |              |      |          |      |
|--------------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                      | mb-15691  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                     | PBS       |         | Batch ID: 15691          |             | RunNo: 21671                              |          |              |      |          |      |
| Prep Date:                     | 10/2/2014 |         | Analysis Date: 10/3/2014 |             | SeqNo: 635963                             |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Toluene                        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Ethylbenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Xylenes, Total                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methyl tert-butyl ether (MTBE) | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3,5-Trimethylbenzene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloroethane (EDC)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromoethane (EDB)        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Naphthalene                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| 2-Methylnaphthalene            | ND        | 0.00400 |                          |             |                                           |          |              |      |          |      |
| Acetone                        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Bromobenzene                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromodichloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromoform                      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Bromomethane                   | ND        | 0.00300 |                          |             |                                           |          |              |      |          |      |
| 2-Butanone                     | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| Carbon tetrachloride           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chlorobenzene                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroethane                   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloroform                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Chloromethane                  | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Carbon disulfide               | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| 4-Chlorotoluene                | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,2-DCE                    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| cis-1,3-Dichloropropene        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dibromo-3-chloropropane    | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromochloromethane           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dibromomethane                 | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,4-Dichlorobenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Dichlorodifluoromethane        | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethane             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloroethene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,3-Dichloropropane            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |                                           |          |              |      |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                   | mb-15691  |         | SampType: MBLK           |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:                  | PBS       |         | Batch ID: 15691          |             | RunNo: 21671                              |          |              |      |          |      |
| Prep Date:                  | 10/2/2014 |         | Analysis Date: 10/3/2014 |             | SeqNo: 635963                             |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| 2,2-Dichloropropane         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1-Dichloropropene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Hexachlorobutadiene         | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Isopropylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Isopropyltoluene          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Methylene chloride          | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| n-Butylbenzene              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 2-Hexanone                  | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| n-Propylbenzene             | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| sec-Butylbenzene            | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Styrene                     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 4-Methyl-2-pentanone        | ND        | 0.0100  |                          |             |                                           |          |              |      |          |      |
| tert-Butylbenzene           | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2,2-Tetrachloroethane   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Tetrachloroethene (PCE)     | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,2-DCE               | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| trans-1,3-Dichloropropene   | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,4-Trichlorobenzene      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,1-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,1,2-Trichloroethane       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichloroethene (TCE)       | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Trichlorofluoromethane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| 1,2,3-Trichloropropane      | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Vinyl chloride              | ND        | 0.00200 |                          |             |                                           |          |              |      |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0198    |         | 0.02000                  |             | 99.2                                      | 70       | 130          |      |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0208    |         | 0.02000                  |             | 104                                       | 65.3     | 135          |      |          |      |
| Surr: Dibromofluoromethane  | 0.0188    |         | 0.02000                  |             | 94.2                                      | 70       | 130          |      |          |      |
| Surr: Toluene-d8            | 0.0205    |         | 0.02000                  |             | 103                                       | 70       | 130          |      |          |      |

|               |           |         |                          |             |                                           |          |              |      |          |      |
|---------------|-----------|---------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID     | ics-15691 |         | SampType: LCS            |             | TestCode: Method 8260B/5035LOW: VOLATILES |          |              |      |          |      |
| Client ID:    | LCSS      |         | Batch ID: 15691          |             | RunNo: 21671                              |          |              |      |          |      |
| Prep Date:    | 10/2/2014 |         | Analysis Date: 10/3/2014 |             | SeqNo: 635966                             |          | Units: mg/Kg |      |          |      |
| Analyte       | Result    | PQL     | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene       | 0.00998   | 0.00200 | 0.01000                  | 0           | 99.8                                      | 70       | 130          |      |          |      |
| Toluene       | 0.0102    | 0.00200 | 0.01000                  | 0           | 102                                       | 70       | 130          |      |          |      |
| Chlorobenzene | 0.00996   | 0.00200 | 0.01000                  | 0           | 99.6                                      | 70       | 130          |      |          |      |

### Qualifiers:

|   |                                                 |    |                                                    |
|---|-------------------------------------------------|----|----------------------------------------------------|
| * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
| E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
| O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |
| R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |
| S | Spike Recovery outside accepted recovery limits |    |                                                    |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |           |         |                          |             |      |                                           |           |              |          |      |
|-----------------------------|-----------|---------|--------------------------|-------------|------|-------------------------------------------|-----------|--------------|----------|------|
| Sample ID                   | Ics-15691 |         | SampType: LCS            |             |      | TestCode: Method 8260B/5035LOW: VOLATILES |           |              |          |      |
| Client ID:                  | LCSS      |         | Batch ID: 15691          |             |      | RunNo: 21671                              |           |              |          |      |
| Prep Date:                  | 10/2/2014 |         | Analysis Date: 10/3/2014 |             |      | SeqNo: 635966                             |           | Units: mg/Kg |          |      |
| Analyte                     | Result    | PQL     | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD         | RPDLimit | Qual |
| 1,1-Dichloroethene          | 0.00933   | 0.00200 | 0.01000                  | 0           | 93.3 | 70                                        | 130       |              |          |      |
| Trichloroethene (TCE)       | 0.00990   | 0.00200 | 0.01000                  | 0           | 99.0 | 61.6                                      | 131       |              |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0202    |         | 0.02000                  |             | 101  | 70                                        | 130       |              |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0194    |         | 0.02000                  |             | 97.1 | 65.3                                      | 135       |              |          |      |
| Surr: Dibromofluoromethane  | 0.0188    |         | 0.02000                  |             | 93.9 | 70                                        | 130       |              |          |      |
| Surr: Toluene-d8            | 0.0207    |         | 0.02000                  |             | 103  | 70                                        | 130       |              |          |      |

|                             |                     |         |                          |             |      |                                           |           |                  |          |      |
|-----------------------------|---------------------|---------|--------------------------|-------------|------|-------------------------------------------|-----------|------------------|----------|------|
| Sample ID                   | 1410011-001ams      |         | SampType: MS             |             |      | TestCode: Method 8260B/5035LOW: VOLATILES |           |                  |          |      |
| Client ID:                  | SWMU 13-23 (0-0.5') |         | Batch ID: 15691          |             |      | RunNo: 21671                              |           |                  |          |      |
| Prep Date:                  | 10/2/2014           |         | Analysis Date: 10/3/2014 |             |      | SeqNo: 635969                             |           | Units: mg/Kg-dry |          |      |
| Analyte                     | Result              | PQL     | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD             | RPDLimit | Qual |
| Benzene                     | 0.00765             | 0.00165 | 0.008265                 | 0           | 92.5 | 70                                        | 130       |                  |          |      |
| Toluene                     | 0.00670             | 0.00165 | 0.008265                 | 0           | 81.0 | 70                                        | 130       |                  |          |      |
| Chlorobenzene               | 0.00746             | 0.00165 | 0.008265                 | 0           | 90.2 | 70                                        | 130       |                  |          |      |
| 1,1-Dichloroethene          | 0.00639             | 0.00165 | 0.008265                 | 0           | 77.3 | 70                                        | 130       |                  |          |      |
| Trichloroethene (TCE)       | 0.00739             | 0.00165 | 0.008265                 | 0           | 89.5 | 70                                        | 130       |                  |          |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0169              |         | 0.01653                  |             | 102  | 70                                        | 130       |                  |          |      |
| Surr: 4-Bromofluorobenzene  | 0.0184              |         | 0.01653                  |             | 111  | 65.3                                      | 135       |                  |          |      |
| Surr: Dibromofluoromethane  | 0.0154              |         | 0.01653                  |             | 93.2 | 70                                        | 130       |                  |          |      |
| Surr: Toluene-d8            | 0.0166              |         | 0.01653                  |             | 101  | 70                                        | 130       |                  |          |      |

|                             |                     |         |                          |             |      |                                           |           |                  |          |      |
|-----------------------------|---------------------|---------|--------------------------|-------------|------|-------------------------------------------|-----------|------------------|----------|------|
| Sample ID                   | 1410011-001amsd     |         | SampType: MSD            |             |      | TestCode: Method 8260B/5035LOW: VOLATILES |           |                  |          |      |
| Client ID:                  | SWMU 13-23 (0-0.5') |         | Batch ID: 15691          |             |      | RunNo: 21671                              |           |                  |          |      |
| Prep Date:                  | 10/2/2014           |         | Analysis Date: 10/3/2014 |             |      | SeqNo: 635971                             |           | Units: mg/Kg-dry |          |      |
| Analyte                     | Result              | PQL     | SPK value                | SPK Ref Val | %REC | LowLimit                                  | HighLimit | %RPD             | RPDLimit | Qual |
| Benzene                     | 0.00793             | 0.00166 | 0.008302                 | 0           | 95.6 | 70                                        | 130       | 3.69             | 20       |      |
| Toluene                     | 0.00728             | 0.00166 | 0.008302                 | 0           | 87.7 | 70                                        | 130       | 8.41             | 20       |      |
| Chlorobenzene               | 0.00770             | 0.00166 | 0.008302                 | 0           | 92.7 | 70                                        | 130       | 3.18             | 20       |      |
| 1,1-Dichloroethene          | 0.00710             | 0.00166 | 0.008302                 | 0           | 85.5 | 70                                        | 130       | 10.5             | 20       |      |
| Trichloroethene (TCE)       | 0.00755             | 0.00166 | 0.008302                 | 0           | 90.9 | 70                                        | 130       | 2.07             | 20       |      |
| Surr: 1,2-Dichloroethane-d4 | 0.0172              |         | 0.01660                  |             | 103  | 70                                        | 130       | 0                | 0        |      |
| Surr: 4-Bromofluorobenzene  | 0.0192              |         | 0.01660                  |             | 116  | 65.3                                      | 135       | 0                | 0        |      |
| Surr: Dibromofluoromethane  | 0.0160              |         | 0.01660                  |             | 96.6 | 70                                        | 130       | 0                | 0        |      |
| Surr: Toluene-d8            | 0.0168              |         | 0.01660                  |             | 101  | 70                                        | 130       | 0                | 0        |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                             |                  |      |                                 |             |                                                  |          |                     |      |          |      |
|-----------------------------|------------------|------|---------------------------------|-------------|--------------------------------------------------|----------|---------------------|------|----------|------|
| Sample ID                   | <b>mb-15682</b>  |      | SampType: <b>MBLK</b>           |             | TestCode: <b>EPA Method 8270C: Semivolatiles</b> |          |                     |      |          |      |
| Client ID:                  | <b>PBS</b>       |      | Batch ID: <b>15682</b>          |             | RunNo: <b>21673</b>                              |          |                     |      |          |      |
| Prep Date:                  | <b>10/2/2014</b> |      | Analysis Date: <b>10/3/2014</b> |             | SeqNo: <b>636169</b>                             |          | Units: <b>mg/Kg</b> |      |          |      |
| Analyte                     | Result           | PQL  | SPK value                       | SPK Ref Val | %REC                                             | LowLimit | HighLimit           | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Acenaphthylene              | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Aniline                     | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Anthracene                  | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Azobenzene                  | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benz(a)anthracene           | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benzo(a)pyrene              | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benzo(b)fluoranthene        | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benzo(g,h,i)perylene        | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benzo(k)fluoranthene        | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Benzoic acid                | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| Benzyl alcohol              | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Bis(2-chloroethoxy)methane  | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Bis(2-chloroethyl)ether     | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Bis(2-chloroisopropyl)ether | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| 4-Bromophenyl phenyl ether  | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Butyl benzyl phthalate      | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Carbazole                   | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 4-Chloro-3-methylphenol     | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| 4-Chloroaniline             | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| 2-Chloronaphthalene         | ND               | 0.25 |                                 |             |                                                  |          |                     |      |          |      |
| 2-Chlorophenol              | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 4-Chlorophenyl phenyl ether | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Chrysene                    | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Di-n-butyl phthalate        | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| Di-n-octyl phthalate        | ND               | 0.40 |                                 |             |                                                  |          |                     |      |          |      |
| Dibenz(a,h)anthracene       | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Dibenzofuran                | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 1,2-Dichlorobenzene         | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 1,3-Dichlorobenzene         | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 1,4-Dichlorobenzene         | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 3,3'-Dichlorobenzidine      | ND               | 0.25 |                                 |             |                                                  |          |                     |      |          |      |
| Diethyl phthalate           | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| Dimethyl phthalate          | ND               | 0.20 |                                 |             |                                                  |          |                     |      |          |      |
| 2,4-Dichlorophenol          | ND               | 0.40 |                                 |             |                                                  |          |                     |      |          |      |
| 2,4-Dimethylphenol          | ND               | 0.30 |                                 |             |                                                  |          |                     |      |          |      |
| 4,6-Dinitro-2-methylphenol  | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |
| 2,4-Dinitrophenol           | ND               | 0.50 |                                 |             |                                                  |          |                     |      |          |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|                            |           |                |           |             |                                 |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID                  | mb-15682  | SampType:      | MBLK      | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 15682     | RunNo:      | 21673                           |          |           |      |          |      |
| Prep Date:                 | 10/2/2014 | Analysis Date: | 10/3/2014 | SeqNo:      | 636169                          | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2,4-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2,6-Dinitrotoluene         | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| Fluoranthene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Fluorene                   | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobenzene          | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorobutadiene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachlorocyclopentadiene  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Hexachloroethane           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Isophorone                 | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylnaphthalene        | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Methylphenol             | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 3+4-Methylphenol           | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodi-n-propylamine  | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| N-Nitrosodiphenylamine     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Naphthalene                | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 3-Nitroaniline             | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitroaniline             | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Nitrobenzene               | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 2-Nitrophenol              | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 4-Nitrophenol              | ND        | 0.25           |           |             |                                 |          |           |      |          |      |
| Pentachlorophenol          | ND        | 0.40           |           |             |                                 |          |           |      |          |      |
| Phenanthrene               | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Phenol                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyrene                     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Pyridine                   | ND        | 0.50           |           |             |                                 |          |           |      |          |      |
| 1,2,4-Trichlorobenzene     | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,5-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| 2,4,6-Trichlorophenol      | ND        | 0.20           |           |             |                                 |          |           |      |          |      |
| Surr: 2-Fluorophenol       | 3.0       |                | 3.330     |             | 89.6                            | 21       | 111       |      |          |      |
| Surr: Phenol-d5            | 3.0       |                | 3.330     |             | 90.0                            | 23.1     | 117       |      |          |      |
| Surr: 2,4,6-Tribromophenol | 2.4       |                | 3.330     |             | 71.7                            | 22.7     | 88.9      |      |          |      |
| Surr: Nitrobenzene-d5      | 1.7       |                | 1.670     |             | 102                             | 24.5     | 126       |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.7       |                | 1.670     |             | 101                             | 21.2     | 129       |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.8       |                | 1.670     |             | 107                             | 39.4     | 107       |      |          |      |

### Qualifiers:

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E Value above quantitation range  
J Analyte detected below quantitation limits  
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B Analyte detected in the associated Method Blank  
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ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                            |           |      |                          |             |                                           |          |              |      |          |      |
|----------------------------|-----------|------|--------------------------|-------------|-------------------------------------------|----------|--------------|------|----------|------|
| Sample ID                  | Ics-15682 |      | SampType: LCS            |             | TestCode: EPA Method 8270C: Semivolatiles |          |              |      |          |      |
| Client ID:                 | LCSS      |      | Batch ID: 15682          |             | RunNo: 21673                              |          |              |      |          |      |
| Prep Date:                 | 10/2/2014 |      | Analysis Date: 10/3/2014 |             | SeqNo: 636170                             |          | Units: mg/Kg |      |          |      |
| Analyte                    | Result    | PQL  | SPK value                | SPK Ref Val | %REC                                      | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Acenaphthene               | 1.6       | 0.20 | 1.670                    | 0           | 95.5                                      | 50.7     | 110          |      |          |      |
| 4-Chloro-3-methylphenol    | 3.5       | 0.50 | 3.330                    | 0           | 106                                       | 47.8     | 107          |      |          |      |
| 2-Chlorophenol             | 3.2       | 0.20 | 3.330                    | 0           | 95.8                                      | 45.7     | 108          |      |          |      |
| 1,4-Dichlorobenzene        | 1.4       | 0.20 | 1.670                    | 0           | 86.5                                      | 46.1     | 112          |      |          |      |
| 2,4-Dinitrotoluene         | 1.6       | 0.50 | 1.670                    | 0           | 94.0                                      | 44.9     | 114          |      |          |      |
| N-Nitrosodi-n-propylamine  | 1.3       | 0.20 | 1.670                    | 0           | 79.6                                      | 38.7     | 128          |      |          |      |
| 4-Nitrophenol              | 2.9       | 0.25 | 3.330                    | 0           | 86.0                                      | 40.2     | 103          |      |          |      |
| Pentachlorophenol          | 1.5       | 0.40 | 3.330                    | 0           | 46.3                                      | 32.9     | 94           |      |          |      |
| Phenol                     | 3.3       | 0.20 | 3.330                    | 0           | 100                                       | 44.1     | 109          |      |          |      |
| Pyrene                     | 1.6       | 0.20 | 1.670                    | 0           | 94.4                                      | 51.9     | 109          |      |          |      |
| 1,2,4-Trichlorobenzene     | 1.6       | 0.20 | 1.670                    | 0           | 96.9                                      | 49.5     | 115          |      |          |      |
| Surr: 2-Fluorophenol       | 3.0       |      | 3.330                    |             | 89.8                                      | 21       | 111          |      |          |      |
| Surr: Phenol-d5            | 3.2       |      | 3.330                    |             | 95.9                                      | 23.1     | 117          |      |          |      |
| Surr: 2,4,6-Tribromophenol | 2.6       |      | 3.330                    |             | 78.6                                      | 22.7     | 88.9         |      |          |      |
| Surr: Nitrobenzene-d5      | 1.8       |      | 1.670                    |             | 110                                       | 24.5     | 126          |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.7       |      | 1.670                    |             | 104                                       | 21.2     | 129          |      |          |      |
| Surr: 4-Terphenyl-d14      | 1.8       |      | 1.670                    |             | 108                                       | 39.4     | 107          |      |          | S    |

|                            |                     |                          |           |             |                                           |          |                  |      |          |      |
|----------------------------|---------------------|--------------------------|-----------|-------------|-------------------------------------------|----------|------------------|------|----------|------|
| Sample ID                  | 1410011-001BMS      | SampType: MS             |           |             | TestCode: EPA Method 8270C: Semivolatiles |          |                  |      |          |      |
| Client ID:                 | SWMU 13-23 (0-0.5') | Batch ID: 15682          |           |             | RunNo: 21673                              |          |                  |      |          |      |
| Prep Date:                 | 10/2/2014           | Analysis Date: 10/3/2014 |           |             | SeqNo: 636187                             |          | Units: mg/Kg-dry |      |          |      |
| Analyte                    | Result              | PQL                      | SPK value | SPK Ref Val | %REC                                      | LowLimit | HighLimit        | %RPD | RPDLimit | Qual |
| Acenaphthene               | 1.5                 | 0.44                     | 1.847     | 0           | 80.2                                      | 53.8     | 92.8             |      |          |      |
| 4-Chloro-3-methylphenol    | 3.1                 | 1.1                      | 3.684     | 0           | 85.2                                      | 34.9     | 104              |      |          |      |
| 2-Chlorophenol             | 2.9                 | 0.44                     | 3.684     | 0           | 79.2                                      | 18.2     | 105              |      |          |      |
| 1,4-Dichlorobenzene        | 1.3                 | 0.44                     | 1.847     | 0           | 71.7                                      | 18.1     | 112              |      |          |      |
| 2,4-Dinitrotoluene         | 1.5                 | 1.1                      | 1.847     | 0           | 80.2                                      | 22       | 144              |      |          |      |
| N-Nitrosodi-n-propylamine  | 1.3                 | 0.44                     | 1.847     | 0           | 71.7                                      | 58.6     | 101              |      |          |      |
| 4-Nitrophenol              | 2.1                 | 0.55                     | 3.684     | 0           | 56.9                                      | 13.7     | 127              |      |          |      |
| Pentachlorophenol          | ND                  | 0.89                     | 3.684     | 0           | 0                                         | 16.5     | 107              |      |          | S    |
| Phenol                     | 2.9                 | 0.44                     | 3.684     | 0           | 79.8                                      | 12.5     | 114              |      |          |      |
| Pyrene                     | 1.5                 | 0.44                     | 1.847     | 0           | 79.4                                      | 14.2     | 116              |      |          |      |
| 1,2,4-Trichlorobenzene     | 1.4                 | 0.44                     | 1.847     | 0           | 78.5                                      | 16       | 125              |      |          |      |
| Surr: 2-Fluorophenol       | 2.6                 |                          | 3.684     |             | 70.5                                      | 21       | 111              |      |          |      |
| Surr: Phenol-d5            | 2.7                 |                          | 3.684     |             | 73.9                                      | 23.1     | 117              |      |          |      |
| Surr: 2,4,6-Tribromophenol | 1.8                 |                          | 3.684     |             | 47.6                                      | 22.7     | 88.9             |      |          |      |
| Surr: Nitrobenzene-d5      | 1.5                 |                          | 1.847     |             | 83.8                                      | 24.5     | 126              |      |          |      |
| Surr: 2-Fluorobiphenyl     | 1.4                 |                          | 1.847     |             | 77.6                                      | 21.2     | 129              |      |          |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

|                       |                     |                |           |             |                                 |          |           |      |          |      |
|-----------------------|---------------------|----------------|-----------|-------------|---------------------------------|----------|-----------|------|----------|------|
| Sample ID             | 1410011-001BMS      | SampType:      | MS        | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |      |          |      |
| Client ID:            | SWMU 13-23 (0-0.5') | Batch ID:      | 15682     | RunNo:      | 21673                           |          |           |      |          |      |
| Prep Date:            | 10/2/2014           | Analysis Date: | 10/3/2014 | SeqNo:      | 636187                          | Units:   | mg/Kg-dry |      |          |      |
| Analyte               | Result              | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Terphenyl-d14 | 1.5                 |                | 1.847     |             | 83.8                            | 39.4     | 107       |      |          |      |

|                            |                     |                |           |             |                                 |          |           |       |          |      |
|----------------------------|---------------------|----------------|-----------|-------------|---------------------------------|----------|-----------|-------|----------|------|
| Sample ID                  | 1410011-001BMSD     | SampType:      | MSD       | TestCode:   | EPA Method 8270C: Semivolatiles |          |           |       |          |      |
| Client ID:                 | SWMU 13-23 (0-0.5') | Batch ID:      | 15682     | RunNo:      | 21673                           |          |           |       |          |      |
| Prep Date:                 | 10/2/2014           | Analysis Date: | 10/3/2014 | SeqNo:      | 636188                          | Units:   | mg/Kg-dry |       |          |      |
| Analyte                    | Result              | PQL            | SPK value | SPK Ref Val | %REC                            | LowLimit | HighLimit | %RPD  | RPDLimit | Qual |
| Acenaphthene               | 1.4                 | 0.44           | 1.852     | 0           | 77.8                            | 53.8     | 92.8      | 2.70  | 22       |      |
| 4-Chloro-3-methylphenol    | 3.2                 | 1.1            | 3.692     | 0           | 86.1                            | 34.9     | 104       | 1.31  | 27.3     |      |
| 2-Chlorophenol             | 2.9                 | 0.44           | 3.692     | 0           | 78.6                            | 18.2     | 105       | 0.453 | 26.3     |      |
| 1,4-Dichlorobenzene        | 1.2                 | 0.44           | 1.852     | 0           | 66.1                            | 18.1     | 112       | 8.00  | 27.4     |      |
| 2,4-Dinitrotoluene         | 1.3                 | 1.1            | 1.852     | 0           | 72.6                            | 22       | 144       | 9.70  | 27.4     |      |
| N-Nitrosodi-n-propylamine  | 1.3                 | 0.44           | 1.852     | 0           | 67.7                            | 58.6     | 101       | 5.44  | 22.6     |      |
| 4-Nitrophenol              | 1.8                 | 0.55           | 3.692     | 0           | 49.3                            | 13.7     | 127       | 14.1  | 20       |      |
| Pentachlorophenol          | ND                  | 0.89           | 3.692     | 0           | 0                               | 16.5     | 107       | 0     | 27.1     | S    |
| Phenol                     | 2.9                 | 0.44           | 3.692     | 0           | 78.5                            | 12.5     | 114       | 1.44  | 32.2     |      |
| Pyrene                     | 1.5                 | 0.44           | 1.852     | 0           | 80.1                            | 14.2     | 116       | 1.08  | 29.5     |      |
| 1,2,4-Trichlorobenzene     | 1.5                 | 0.44           | 1.852     | 0           | 78.4                            | 16       | 125       | 0.131 | 27.8     |      |
| Surr: 2-Fluorophenol       | 2.4                 |                | 3.692     |             | 65.4                            | 21       | 111       | 0     | 0        |      |
| Surr: Phenol-d5            | 2.7                 |                | 3.692     |             | 71.9                            | 23.1     | 117       | 0     | 0        |      |
| Surr: 2,4,6-Tribromophenol | 1.5                 |                | 3.692     |             | 39.7                            | 22.7     | 88.9      | 0     | 0        |      |
| Surr: Nitrobenzene-d5      | 1.5                 |                | 1.852     |             | 80.0                            | 24.5     | 126       | 0     | 0        |      |
| Surr: 2-Fluorobiphenyl     | 1.6                 |                | 1.852     |             | 85.0                            | 21.2     | 129       | 0     | 0        |      |
| Surr: 4-Terphenyl-d14      | 1.6                 |                | 1.852     |             | 84.1                            | 39.4     | 107       | 0     | 0        |      |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 O RSD is greater than RSDlimit  
 R RPD outside accepted recovery limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 P Sample pH greater than 2.  
 RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |           |       |                          |             |                                    |          |              |      |          |      |
|------------|-----------|-------|--------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID  | MB-15805  |       | SampType: MBLK           |             | TestCode: EPA Method 7471: Mercury |          |              |      |          |      |
| Client ID: | PBS       |       | Batch ID: 15805          |             | RunNo: 21806                       |          |              |      |          |      |
| Prep Date: | 10/8/2014 |       | Analysis Date: 10/9/2014 |             | SeqNo: 640877                      |          | Units: mg/Kg |      |          |      |
| Analyte    | Result    | PQL   | SPK value                | SPK Ref Val | %REC                               | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Mercury    | ND        | 0.031 |                          |             |                                    |          |              |      |          |      |

|            |           |       |           |                |           |          |           |                          |          |        |       |
|------------|-----------|-------|-----------|----------------|-----------|----------|-----------|--------------------------|----------|--------|-------|
| Sample ID  | LCS-15805 |       |           | SampType:      | LCS       |          | TestCode: | EPA Method 7471: Mercury |          |        |       |
| Client ID: | LCSS      |       |           | Batch ID:      | 15805     |          | RunNo:    | 21806                    |          |        |       |
| Prep Date: | 10/8/2014 |       |           | Analysis Date: | 10/9/2014 |          | SeqNo:    | 641056                   |          | Units: | mg/Kg |
| Analyte    | Result    | PQL   | SPK value | SPK Ref Val    | %REC      | LowLimit | HighLimit | %RPD                     | RPDLimit | Qual   |       |
| Mercury    | 0.17      | 0.033 | 0.1667    | 0              | 102       | 80       | 120       |                          |          |        |       |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>MB-15701</b>  |      | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>PBS</b>       |      | Batch ID:      | <b>15701</b>     |      | RunNo:    | <b>21664</b>                         |      |                     |      |
| Prep Date: | <b>10/3/2014</b> |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635631</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Arsenic    | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Barium     | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Beryllium  | ND               | 0.15 |                |                  |      |           |                                      |      |                     |      |
| Cadmium    | ND               | 0.10 |                |                  |      |           |                                      |      |                     |      |
| Chromium   | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Cobalt     | ND               | 0.30 |                |                  |      |           |                                      |      |                     |      |
| Lead       | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Nickel     | ND               | 0.50 |                |                  |      |           |                                      |      |                     |      |
| Selenium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Silver     | ND               | 0.25 |                |                  |      |           |                                      |      |                     |      |
| Vanadium   | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |
| Zinc       | ND               | 2.5  |                |                  |      |           |                                      |      |                     |      |

|            |                  |      |                |                  |      |           |                                      |      |                     |      |
|------------|------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|---------------------|------|
| Sample ID  | <b>LCS-15701</b> |      | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                     |      |
| Client ID: | <b>LCSS</b>      |      | Batch ID:      | <b>15701</b>     |      | RunNo:    | <b>21664</b>                         |      |                     |      |
| Prep Date: | <b>10/3/2014</b> |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635632</b>                        |      | Units: <b>mg/Kg</b> |      |
| Analyte    | Result           | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit            | Qual |
| Antimony   | 24               | 2.5  | 25.00          | 0                | 95.3 | 80        | 120                                  |      |                     |      |
| Arsenic    | 25               | 2.5  | 25.00          | 0                | 99.0 | 80        | 120                                  |      |                     |      |
| Barium     | 25               | 0.10 | 25.00          | 0                | 98.0 | 80        | 120                                  |      |                     |      |
| Beryllium  | 26               | 0.15 | 25.00          | 0                | 103  | 80        | 120                                  |      |                     |      |
| Cadmium    | 24               | 0.10 | 25.00          | 0                | 96.8 | 80        | 120                                  |      |                     |      |
| Chromium   | 24               | 0.30 | 25.00          | 0                | 96.4 | 80        | 120                                  |      |                     |      |
| Cobalt     | 23               | 0.30 | 25.00          | 0                | 93.9 | 80        | 120                                  |      |                     |      |
| Lead       | 23               | 0.25 | 25.00          | 0                | 93.6 | 80        | 120                                  |      |                     |      |
| Nickel     | 24               | 0.50 | 25.00          | 0                | 94.7 | 80        | 120                                  |      |                     |      |
| Selenium   | 24               | 2.5  | 25.00          | 0                | 95.8 | 80        | 120                                  |      |                     |      |
| Silver     | 5.1              | 0.25 | 5.000          | 0                | 101  | 80        | 120                                  |      |                     |      |
| Vanadium   | 26               | 2.5  | 25.00          | 0                | 103  | 80        | 120                                  |      |                     |      |
| Zinc       | 24               | 2.5  | 25.00          | 0                | 95.3 | 80        | 120                                  |      |                     |      |

|            |                            |      |                |                  |      |           |                                      |      |                         |      |
|------------|----------------------------|------|----------------|------------------|------|-----------|--------------------------------------|------|-------------------------|------|
| Sample ID  | <b>1410011-002BMS</b>      |      | SampType:      | <b>MS</b>        |      | TestCode: | <b>EPA Method 6010B: Soil Metals</b> |      |                         |      |
| Client ID: | <b>SWMU 13-24 (0-0.5')</b> |      | Batch ID:      | <b>15701</b>     |      | RunNo:    | <b>21664</b>                         |      |                         |      |
| Prep Date: | <b>10/3/2014</b>           |      | Analysis Date: | <b>10/4/2014</b> |      | SeqNo:    | <b>635662</b>                        |      | Units: <b>mg/Kg-dry</b> |      |
| Analyte    | Result                     | PQL  | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                            | %RPD | RPDLimit                | Qual |
| Arsenic    | 27                         | 2.8  | 27.54          | 1.457            | 91.1 | 75        | 125                                  |      |                         |      |
| Beryllium  | 25                         | 0.17 | 27.54          | 0.1990           | 91.8 | 75        | 125                                  |      |                         |      |

### Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

**Client:** Western Refining Southwest, Inc.

**Project:** GROUP 9

| Sample ID  | 1410011-002BMS      |      | SampType:      | MS          |      | TestCode: | EPA Method 6010B: Soil Metals |      |                  |      |
|------------|---------------------|------|----------------|-------------|------|-----------|-------------------------------|------|------------------|------|
| Client ID: | SWMU 13-24 (0-0.5') |      | Batch ID:      | 15701       |      | RunNo:    | 21664                         |      |                  |      |
| Prep Date: | 10/3/2014           |      | Analysis Date: | 10/4/2014   |      | SeqNo:    | 635662                        |      | Units: mg/Kg-dry |      |
| Analyte    | Result              | PQL  | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                     | %RPD | RPDLimit         | Qual |
| Cadmium    | 24                  | 0.11 | 27.54          | 0.05376     | 87.0 | 75        | 125                           |      |                  |      |
| Chromium   | 28                  | 0.33 | 27.54          | 3.421       | 88.4 | 75        | 125                           |      |                  |      |
| Cobalt     | 25                  | 0.33 | 27.54          | 1.956       | 82.2 | 75        | 125                           |      |                  |      |
| Lead       | 24                  | 0.28 | 27.54          | 2.678       | 78.7 | 75        | 125                           |      |                  |      |
| Nickel     | 25                  | 0.55 | 27.54          | 2.505       | 82.4 | 75        | 125                           |      |                  |      |
| Selenium   | 23                  | 2.8  | 27.54          | 0           | 83.3 | 75        | 125                           |      |                  |      |
| Silver     | 5.0                 | 0.28 | 5.508          | 0           | 89.9 | 75        | 125                           |      |                  |      |
| Vanadium   | 43                  | 2.8  | 27.54          | 15.41       | 99.1 | 75        | 125                           |      |                  |      |
| Zinc       | 60                  | 2.8  | 27.54          | 38.09       | 80.6 | 75        | 125                           |      |                  |      |

| Sample ID  | 1410011-002BMSD     |      | SampType:      | MSD         |      | TestCode: | EPA Method 6010B: Soil Metals |        |                  |      |
|------------|---------------------|------|----------------|-------------|------|-----------|-------------------------------|--------|------------------|------|
| Client ID: | SWMU 13-24 (0-0.5') |      | Batch ID:      | 15701       |      | RunNo:    | 21664                         |        |                  |      |
| Prep Date: | 10/3/2014           |      | Analysis Date: | 10/4/2014   |      | SeqNo:    | 635663                        |        | Units: mg/Kg-dry |      |
| Analyte    | Result              | PQL  | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                     | %RPD   | RPDLimit         | Qual |
| Arsenic    | 27                  | 2.7  | 27.31          | 1.457       | 91.8 | 75        | 125                           | 0.0842 | 20               |      |
| Beryllium  | 25                  | 0.16 | 27.31          | 0.1990      | 91.7 | 75        | 125                           | 0.974  | 20               |      |
| Cadmium    | 23                  | 0.11 | 27.31          | 0.05376     | 85.3 | 75        | 125                           | 2.76   | 20               |      |
| Chromium   | 27                  | 0.33 | 27.31          | 3.421       | 85.8 | 75        | 125                           | 3.36   | 20               |      |
| Cobalt     | 25                  | 0.33 | 27.31          | 1.956       | 85.3 | 75        | 125                           | 2.59   | 20               |      |
| Lead       | 24                  | 0.27 | 27.31          | 2.678       | 78.8 | 75        | 125                           | 0.639  | 20               |      |
| Nickel     | 25                  | 0.55 | 27.31          | 2.505       | 81.4 | 75        | 125                           | 1.86   | 20               |      |
| Selenium   | 22                  | 2.7  | 27.31          | 0           | 81.4 | 75        | 125                           | 3.13   | 20               |      |
| Silver     | 4.8                 | 0.27 | 5.462          | 0           | 88.3 | 75        | 125                           | 2.62   | 20               |      |
| Vanadium   | 41                  | 2.7  | 27.31          | 15.41       | 93.9 | 75        | 125                           | 3.94   | 20               |      |
| Zinc       | 61                  | 2.7  | 27.31          | 38.09       | 83.6 | 75        | 125                           | 1.07   | 20               |      |

| Sample ID  | 1410011-002BMS      |      | SampType:      | MS          |      | TestCode: | EPA Method 6010B: Soil Metals |      |                  |      |
|------------|---------------------|------|----------------|-------------|------|-----------|-------------------------------|------|------------------|------|
| Client ID: | SWMU 13-24 (0-0.5') |      | Batch ID:      | 15701       |      | RunNo:    | 21664                         |      |                  |      |
| Prep Date: | 10/3/2014           |      | Analysis Date: | 10/4/2014   |      | SeqNo:    | 635699                        |      | Units: mg/Kg-dry |      |
| Analyte    | Result              | PQL  | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                     | %RPD | RPDLimit         | Qual |
| Antimony   | 12                  | 2.8  | 27.54          | 0           | 42.1 | 75        | 125                           |      |                  | S    |
| Barium     | 110                 | 0.11 | 27.54          | 80.47       | 108  | 75        | 125                           |      |                  |      |

| Sample ID  | 1410011-002BMSD     |     | SampType:      | MSD         |      | TestCode: | EPA Method 6010B: Soil Metals |      |                  |      |
|------------|---------------------|-----|----------------|-------------|------|-----------|-------------------------------|------|------------------|------|
| Client ID: | SWMU 13-24 (0-0.5') |     | Batch ID:      | 15701       |      | RunNo:    | 21664                         |      |                  |      |
| Prep Date: | 10/3/2014           |     | Analysis Date: | 10/4/2014   |      | SeqNo:    | 635702                        |      | Units: mg/Kg-dry |      |
| Analyte    | Result              | PQL | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                     | %RPD | RPDLimit         | Qual |

### Qualifiers:

- |                                                   |                                                      |
|---------------------------------------------------|------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |                                                      |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1410011

23-Oct-14

Client: Western Refining Southwest, Inc.

Project: GROUP 9

|            |                     |                |           |             |                               |          |           |      |          |      |
|------------|---------------------|----------------|-----------|-------------|-------------------------------|----------|-----------|------|----------|------|
| Sample ID  | 1410011-002BMSD     | SampType:      | MSD       | TestCode:   | EPA Method 6010B: Soil Metals |          |           |      |          |      |
| Client ID: | SWMU 13-24 (0-0.5') | Batch ID:      | 15701     | RunNo:      | 21664                         |          |           |      |          |      |
| Prep Date: | 10/3/2014           | Analysis Date: | 10/4/2014 | SeqNo:      | 635702                        | Units:   | mg/Kg-dry |      |          |      |
| Analyte    | Result              | PQL            | SPK value | SPK Ref Val | %REC                          | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony   | 12                  | 2.7            | 27.31     | 0           | 44.1                          | 75       | 125       | 3.79 | 20       | S    |
| Barium     | 130                 | 0.11           | 27.31     | 80.47       | 181                           | 75       | 125       | 16.3 | 20       | S    |

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2.  
RL Reporting Detection Limit

# Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1410011

RcptNo: 1

Received by/date: LM 10/01/14

Logged By: Michelle Garcia 10/1/2014 7:30:00 AM

*Michelle Garcia*

Completed By: Michelle Garcia 10/1/2014 10:08:02 AM

*Michelle Garcia*

Reviewed By: CS 10/01/14

## Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

## Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH: \_\_\_\_\_  
(<2 or >12 unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

|                      |                                                                                                                                    |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Person Notified:     | Date:                                                                                                                              |
| By Whom:             | Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person |
| Regarding:           |                                                                                                                                    |
| Client Instructions: |                                                                                                                                    |

17. Additional remarks:

## 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 1.3     | Good      | Yes         |         |           |           |





# Metals and Cyanide for Soil and Groundwater Samples

| Analyte                   | Analytical Method                   |
|---------------------------|-------------------------------------|
| Antimony                  | SW-846 method 6010/6020             |
| Arsenic                   | SW-846 method 6010/6020             |
| Barium                    | SW-846 method 6010/6020             |
| Beryllium                 | SW-846 method 6010/6020             |
| Cadmium                   | SW-846 method 6010/6020             |
| Chromium                  | SW-846 method 6010/6020             |
| <del>Chromium VI</del>    | <del>SW-846 method 6010/6020A</del> |
| Cobalt                    | SW-846 method 6010/6020             |
| Cyanide                   | SW-846 method 335.4/335.2 mod       |
| Lead                      | SW-846 method 6010/6020             |
| <del>Tetraethyllead</del> | <del>SW-846 method 6270G</del>      |
| Mercury                   | SW-846 method 7470/7471             |
| Nickel                    | SW-846 method 6010/6020             |
| Selenium                  | SW-846 method 6010/6020             |
| Silver                    | SW-846 method 6010/6020             |
| Vanadium                  | SW-846 method 6010/6020             |
| Zinc                      | SW-846 method 6010/6020             |



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 29, 2014

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GROUP 9

OrderNo.: 1410080

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 8 sample(s) on 10/2/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

## Case Narrative

WO#: 1410080  
Date: 10/29/2014

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**CLIENT:** Western Refining Southwest, Inc.  
**Project:** GROUP 9

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Surrogate recoveries with an "S" flag have poor or elevated recoveries due to matrix interferences and/or sample dilution.

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410080

Date Reported: 10/29/2014

**CLIENT:** Western Refining Southwest, Inc.

**Client Sample ID:** SWMU 13-27 (0-0.5')

**Project:** GROUP 9

**Collection Date:** 9/30/2014 8:40:00 AM

**Lab ID:** 1410080-001

**Matrix:** SOIL

**Received Date:** 10/2/2014 6:50:00 AM

| Analyses                                       | Result | RL       | Qual | Units     | DF | Date Analyzed         | Batch                |
|------------------------------------------------|--------|----------|------|-----------|----|-----------------------|----------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |           |    |                       | Analyst: <b>BCN</b>  |
| Diesel Range Organics (DRO)                    | 110    | 11       |      | mg/Kg-dry | 1  | 10/3/2014 10:08:30 AM | 15671                |
| Motor Oil Range Organics (MRO)                 | 470    | 56       |      | mg/Kg-dry | 1  | 10/3/2014 10:08:30 AM | 15671                |
| Surr: DNOP                                     | 97.3   | 57.9-140 |      | %REC      | 1  | 10/3/2014 10:08:30 AM | 15671                |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |           |    |                       | Analyst: <b>NSB</b>  |
| Gasoline Range Organics (GRO)                  | ND     | 3.4      |      | mg/Kg-dry | 1  | 10/3/2014 12:19:00 AM | R21609               |
| Surr: BFB                                      | 90.4   | 80-120   |      | %REC      | 1  | 10/3/2014 12:19:00 AM | R21609               |
| <b>PERCENT MOISTURE</b>                        |        |          |      |           |    |                       | Analyst: <b>cadg</b> |
| Percent Moisture                               | 12     | 1.0      |      | wt%       | 1  | 10/2/2014 2:09:00 PM  | R21638               |
| <b>EPA METHOD 7471: MERCURY</b>                |        |          |      |           |    |                       | Analyst: <b>MMD</b>  |
| Mercury                                        | 0.25   | 0.19     |      | mg/Kg-dry | 5  | 10/9/2014 2:46:32 PM  | 15806                |
| <b>EPA METHOD 6010B: SOIL METALS</b>           |        |          |      |           |    |                       | Analyst: <b>ELS</b>  |
| Antimony                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Arsenic                                        | 22     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Barium                                         | 160    | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Beryllium                                      | 0.41   | 0.17     |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Cadmium                                        | 0.14   | 0.11     |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Chromium                                       | 9.9    | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Cobalt                                         | 3.9    | 0.33     |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Lead                                           | 10     | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Nickel                                         | 16     | 0.56     |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Selenium                                       | ND     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Silver                                         | ND     | 0.28     |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Vanadium                                       | 46     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| Zinc                                           | 79     | 2.8      |      | mg/Kg-dry | 1  | 10/4/2014 2:01:47 PM  | 15701                |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>         |        |          |      |           |    |                       | Analyst: <b>JDC</b>  |
| Acenaphthene                                   | ND     | 2.3      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |
| Acenaphthylene                                 | ND     | 2.3      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |
| Aniline                                        | ND     | 2.3      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |
| Anthracene                                     | ND     | 2.3      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |
| Azobenzene                                     | ND     | 2.3      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |
| Benz(a)anthracene                              | ND     | 2.3      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |
| Benzo(a)pyrene                                 | ND     | 2.3      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |
| Benzo(b)fluoranthene                           | ND     | 2.3      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |
| Benzo(g,h,i)perylene                           | ND     | 2.3      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |
| Benzo(k)fluoranthene                           | ND     | 2.3      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |
| Benzoic acid                                   | ND     | 5.6      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |
| Benzyl alcohol                                 | ND     | 2.3      |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM  | 15682                |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
|                    | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|                    | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|                    | O RSD is greater than RSDlimit                    | P Sample pH greater than 2.                          |
|                    | R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
|                    | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1410080

Date Reported: 10/29/2014

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SWMU 13-27 (0-0.5')

Project: GROUP 9

Collection Date: 9/30/2014 8:40:00 AM

Lab ID: 1410080-001

Matrix: SOIL

Received Date: 10/2/2014 6:50:00 AM

| Analyses                               | Result | RL  | Qual | Units     | DF | Date Analyzed        | Batch        |
|----------------------------------------|--------|-----|------|-----------|----|----------------------|--------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |           |    |                      | Analyst: JDC |
| Bis(2-chloroethoxy)methane             | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Bis(2-chloroethyl)ether                | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Bis(2-chloroisopropyl)ether            | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Bis(2-ethylhexyl)phthalate             | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 4-Bromophenyl phenyl ether             | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Butyl benzyl phthalate                 | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Carbazole                              | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 4-Chloro-3-methylphenol                | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 4-Chloroaniline                        | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 2-Chloronaphthalene                    | ND     | 2.8 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 2-Chlorophenol                         | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 4-Chlorophenyl phenyl ether            | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Chrysene                               | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Di-n-butyl phthalate                   | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Di-n-octyl phthalate                   | ND     | 4.5 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Dibenz(a,h)anthracene                  | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Dibenzofuran                           | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 1,2-Dichlorobenzene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 1,3-Dichlorobenzene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 1,4-Dichlorobenzene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 3,3'-Dichlorobenzidine                 | ND     | 2.8 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Diethyl phthalate                      | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Dimethyl phthalate                     | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 2,4-Dichlorophenol                     | ND     | 4.5 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 2,4-Dimethylphenol                     | ND     | 3.4 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 4,6-Dinitro-2-methylphenol             | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 2,4-Dinitrophenol                      | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 2,4-Dinitrotoluene                     | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 2,6-Dinitrotoluene                     | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Fluoranthene                           | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Fluorene                               | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Hexachlorobenzene                      | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Hexachlorobutadiene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Hexachlorocyclopentadiene              | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Hexachloroethane                       | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Indeno(1,2,3-cd)pyrene                 | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| Isophorone                             | ND     | 5.6 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 1-Methylnaphthalene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |
| 2-Methylnaphthalene                    | ND     | 2.3 |      | mg/Kg-dry | 1  | 10/3/2014 6:03:45 PM | 15682        |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |   |                                                 |    |                                                    |              |
|--------------------|---|-------------------------------------------------|----|----------------------------------------------------|--------------|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 3 of 57 |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |              |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |              |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                          |              |
|                    | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |
|                    | S | Spike Recovery outside accepted recovery limits |    |                                                    |              |