OIL CONS. DIV DIST. 3

JAN 08 2016

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company: BP | Contact: Jeff Peace |
| Address: 200 Energy Court, Farmington, NM 87401 | Telephone No.: 505-326-9479 |
| Facility Name: Ulabarri Gas Com 002 | Facility Type: Natural gas well |

| | | |
|---|---|---|
| Surface Owner: Fee | Mineral Owner: Fee | API No. 30045~~11632~~ 08894 |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County: San Juan |
|---|---|---|---|---|---|---|---|---|
| O | 35 | 30N | 9W | 810 | South | 1,850 | East | |

**Latitude** 36.76291 **Longitude** -107.74703

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Oil/condensate | Volume of Release: unknown | Volume Recovered: none |
| Source of Release: Line drip | Date and Hour of Occurrence: unknown | Date and Hour of Discovery: September 23, 2011 |
| Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required | If YES, To Whom? | |
| By Whom? | Date and Hour | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | |

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Soil impacts were found during the removal of a line drip pot. Depth to groundwater of less than 5 feet suggested high potential of groundwater impacts. An extensive excavation of impacted soils removed approximately 6,000 cubic yards that were removed and transported off site for treatment. Groundwater monitoring wells were installed to determine impacts.

Describe Area Affected and Cleanup Action Taken.* Approximately 6,000 cubic yards of soil was excavated and removed from the site for offsite treatment. The area of excavation extended over approximately 0.25 acres to depths reaching 14 feet. The extents of impacted soils were determined and removed from the site. Laboratory results are attached. Groundwater impacts were suspected. Monitoring wells were installed, purged and sampled. Results of the laboratory analysis of the groundwater samples determined insignificant impacts to groundwater below groundwater quality standards. Laboratory results are attached.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

| | |
|---|---|
| Signature: Steve Moskal | OIL CONSERVATION DIVISION |
| Printed Name: Steve Moskal | Approved by Environmental Specialist: |
| Title: Field Environmental Coordinator | Approval Date: 5/10/2016 Expiration Date: |
| E-mail Address: steven.moskal@bp.com | Conditions of Approval: — Attached ☐ |
| Date: January 7, 2015 Phone: 505-326-9497 | |

* Attach Additional Sheets If Necessary

NJK1524538189

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# BP AMERICA PRODUCTION CO.

## REMEDIATION REPORT

**ULIBARRI GC 002**
**API #: 300-45-08894**
**(O) SECTION 35, T30N, R9W, NMPM**
**SAN JUAN COUNTY, NEW MEXICO**

*PREPARED FOR:*
*NEW MEXICO OIL CONSERVATION DIVISION*
*1220 ST. FRANCIS DRIVE*
*SANTA FE, NEW MEXICO 87504*

*JANUARY 2016*

*PREPARED BY:*
*BLAGG ENGINEERING, INC.*

*Consulting Petroleum / Reclamation Services*
*P.O. Box 87*
*Bloomfield, New Mexico 87413*

# TABLE OF CONTENTS

# BP AMERICA PRODUCTION COMPANY

**REMEDIATION OF SUBSURFACE PIPING RELEASE**
**ULIBARRI GC # 2**
**API #: 300-45-08894**
**Legal Description: (Unit Letter 0, Sec. 35, T30N, R9W, NMPM)**

## CHRONOLOGICAL EVENT SUMMATION

1. September 23, 2011 (Friday): During removal of a drip pot due west of the well head, impacted soils were discovered near its piping riser. Only a visual evaluation was conducted on this date. Depth to groundwater was estimated between four (4) to seven (7) feet (ft.) below grade (b.g.).

2. June 26, 2012 (Tuesday): Initial investigation was conducted on-site only with the advancement of test holes using a backhoe (see Figure 1). A total of nine (9) test holes were advanced to a maximum depth of seven and a half (7½) ft. b.g. Samples from the total depth of each test holes were field screened, and submitted to an accredited laboratory to be analyzed for Total Petroleum Hydrocarbons (TPH) per US EPA Method 8015B, chlorides per US EPA Method 300.0, benzene, toluene, ethylbenzene, and total xylenes (BTEX) per US EPA Method 8021B.

3. June 27, 2012 (Wednesday): Subsequent investigation to further delineate lateral impacts off-site was conducted using a backhoe (see Figure 2). A total of six (6) test holes were advanced to a maximum depth of eight (8) ft. b.g. Samples from the total depth of each test holes were field screened, and submitted to an accredited laboratory to be analyzed for TPH, chlorides, and BTEX.

4. January 22, 2013 (Tuesday): A single grab sample [sample (160', S43W) @ 11'; noted as sample point 30 on Figure 3] was collected at the southern extent of the investigation noted above and submitted to a laboratory for TPH, BTEX, and chloride analyzes. The lab results recorded TPH = 990 milligram per kilogram (mg/Kg) or parts per million (ppm). Benzene was shown to be not detected (ND) at the reporting limits and total BTEX = 1.7 ppm.

5. February 5th,6th, & 8th, 2013 (Tuesday, Wednesday & Friday): Subsequent investigation to continue to delineate lateral and vertical of impacts was conducted using a geoprobe. A total of thirteen (13) borings were advanced to a maximum depth of thirteen (13) ft. b.g. Samples collected from each boring were field screened only (Field and Lab Data Summary Sheets attached, see also corresponding Figure 3 and Figure 4 for sample locations).

6. February 2013: BP commenced excavation of impacted soils.

7. February 15th through March 11th, 2013: Excavation perimeter grab and composite samples were collected on nine (9) separate sampling events (Field and Lab Data Summary Sheet attached, see also corresponding Figure 5 for sample locations). Approximately 6,000 cubic yards of soil was excavated and transported to BP's Crouch Mesa Facility.

8. March 22nd & 25th, 2013 (Friday & Monday): Blagg Engineering, Inc. (BEI) was contacted to provide technical support for the installation of a groundwater monitor wells for both sites on the well pad (Ulibarri GC #1A & #2). Boring logs and well completion data are attached (see also corresponding Figure 6 for well locations).

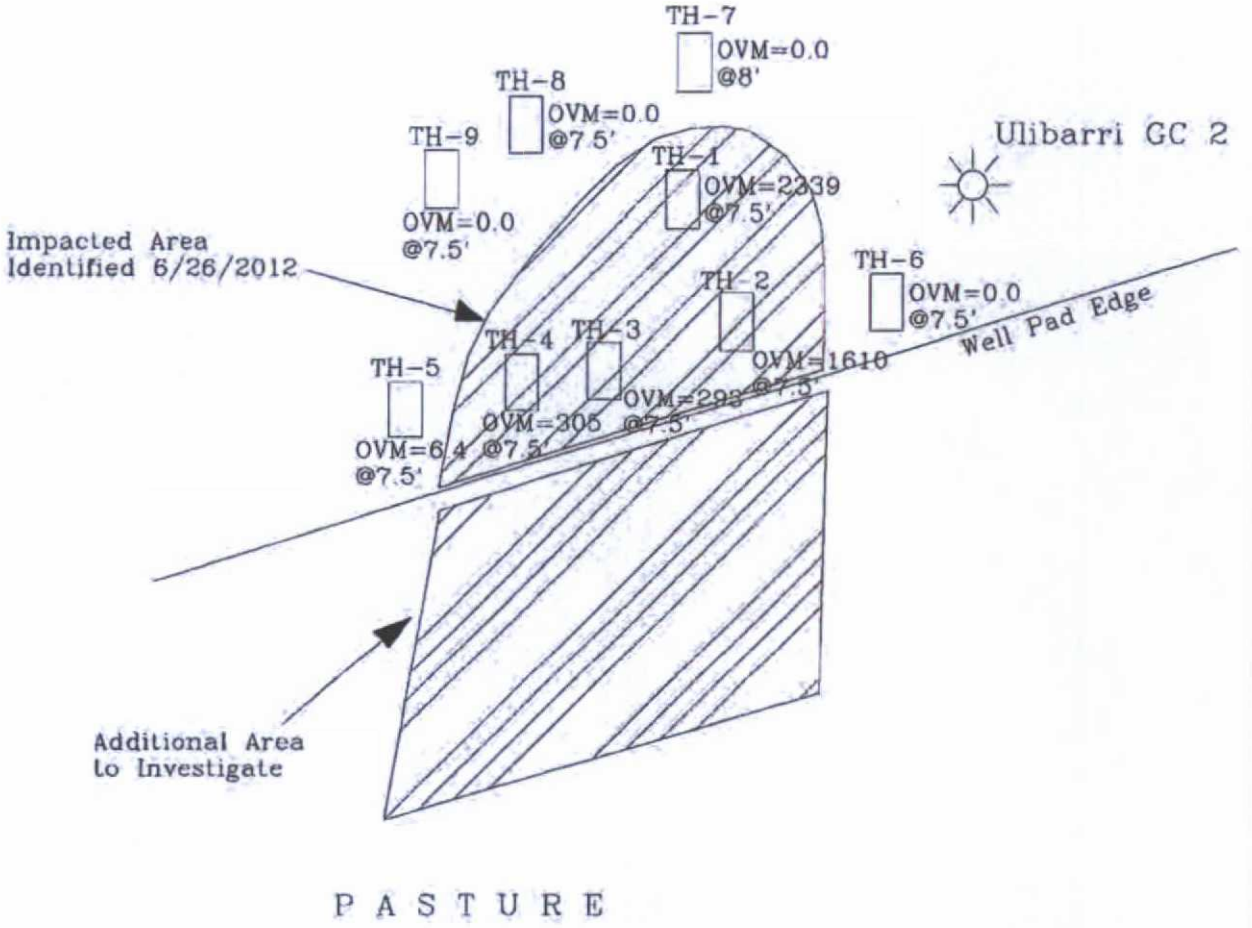
9. March 27, 2013 (Wednesday): BEI conducted survey of the monitor well casing tops.

10. April 11, 2013 (Thursday): BEI conducted development/purging of two (2) of four (4) monitor wells addressing the remedial effort at the site. The goal was to eliminate sediment accumulation during the installation process and to observe recovery patterns during high and low purging levels. All purged groundwater was disposed into the on-site low profile above-grade tank.

11. April 24, 2013 (Thursday): BEI conducted development/purging of two (2) of four (4) monitor wells addressing the remedial effort at the site. All purged groundwater was disposed into the on-site low profile above-grade tank.

12. April 29, 2013 (Monday): BEI conducted environmental sampling of the four (4) on-site monitor wells (Field Sampling Data Sheet attached).

13. May 16, 2013 (Thursday): BEI & BP received final lab reports for samples collected on 04/29/2013. The lab results recorded all BTEX constituents to be ND at the reporting limits or well below the New Mexico Water Quality Control Commission's groundwater closure standards (Field and Lab Data Summary Sheet attached).




LEGEND

N

0 50 100 Feet

| SITE MAP<br>BP ** Ulibarri GC 2 ** (O)35-T30N-R9W | | | BLAGG ENGINEERING, INC. |
|---|---|---|---|
| DATE: 6/2012 | FIGURE 1 | BY: JCB | P.O. BOX 87, BLOOMFIELD, NM<br>PHONE: (505)632-1199 |

| MAP DESIGNATION | SAMPLE ID | DEPTH | DATE | TIME | OVM (ppm) | TPH (ppm) | Benzene (ppm) | Total BTEX (ppm) | Chloride (ppm) |
|---|---|---|---|---|---|---|---|---|---|
| 33 | BH-2 (228', S36.5W) | 10' | 02/05/13 | 1239 | **0.6** | NA | NA | NA | NA |
| 34 | BH-2 (228', S36.5W) | 11'-13' | 02/05/13 | 1242 | **1.0** | NA | NA | NA | NA |
| 35 | BH-3 (209', S53W) | 10' | 02/05/13 | 1404 | **0.0** | NA | NA | NA | NA |
| 36 | BH-3 (209', S53W) | 13'-14' | 02/05/13 | 1410 | **1.0** | NA | NA | NA | NA |
| 37 | BH-4 (152', S21W | 10' | 02/05/13 | 1518 | **0.0** | NA | NA | NA | NA |
| 38 | BH-4 (152', S21W | 12'-13' | 02/05/13 | 1524 | **0.0** | NA | NA | NA | NA |
| 39 | BH-5 (198.5', S66.5W) | 10' | 02/06/13 | 0950 | **0.0** | NA | NA | NA | NA |
| 40 | BH-5 (198.5', S66.5W) | 12'-13' | 02/06/13 | 0952 | **0.3** | NA | NA | NA | NA |
| 41 | BH-6 (45', S47W) | 10' | 02/06/13 | 1023 | **0.6** | NA | NA | NA | NA |
| 42 | BH-6 (45', S47W) | 12'-13' | 02/06/13 | 1024 | **2.0** | NA | NA | NA | NA |
| 43 | BH-7 (208', S28W) | 10' | 02/06/13 | 1105 | **0.5** | NA | NA | NA | NA |
| 44 | BH-7 (208', S28W) | 12'-13' | 02/06/13 | 1107 | **0.5** | NA | NA | NA | NA |
| 45 | BH-8 (181', S28W) | 10' | 02/06/13 | 1136 | **2.7** | NA | NA | NA | NA |
| 46 | BH-8 (181', S28W) | 12'-13' | 02/06/13 | 1138 | **24.1** | NA | NA | NA | NA |
| 47 | BH-19 (166', S84W) | 10' | 02/08/13 | 1010 | **0.0** | NA | NA | NA | NA |
| 48 | BH-19 (166', S84W) | 12'-13' | 02/08/13 | 1012 | **0.3** | NA | NA | NA | NA |
| 49 | BH-20 (92', N73W) | 10' | 02/08/13 | 1053 | **0.0** | NA | NA | NA | NA |
| 50 | BH-20 (92', N73W) | 12'-13' | 02/08/13 | 1056 | **0.3** | NA | NA | NA | NA |
| 51 | BH-21 (103', S29W) | 10' | 02/08/13 | 1123 | **0.0** | NA | NA | NA | NA |
| 52 | BH-21 (103', S29W) | 13'-14' | 02/08/13 | 1126 | **0.0** | NA | NA | NA | NA |
| 53 | BH-22 (45', S47W) | 10' | 02/08/13 | 1212 | **264** | NA | NA | NA | NA |
| 54 | BH-22 (45', S47W) | 12'-13' | 02/08/13 | 1214 | **188** | NA | NA | NA | NA |
| 55 | BH-23 (47', N77W) | 10' | 02/08/13 | 1237 | **0.5** | NA | NA | NA | NA |
| 56 | BH-23 (47', N77W) | 12'-13' | 02/08/13 | 1239 | **0.5** | NA | NA | NA | NA |
| **NMOCD RELEASE CLOSURE STANDARDS (soils) -** | | | | | **100** | **100** | **10** | **50** | **NA** |

**Notes:**

DEPTH - Footage beneath the present ground surface grade.
OVM - Organic vapor meter or photo-ionization detector (PID).
TPH - Total petroleum hydrocarbons by US EPA Method 8015B.
BTEX - Benzene, toluene, ethylbenzene, total xylenes by US EPA Method 8021B.
ppm - Parts per million or milligram per kilogram (mg/Kg).
ND - Not detected at Reporting Limit.
NA - Not applicable or available
NMOCD - New Mexico Oil Conservation Division.

# BP AMERICA PRODUCTION COMPANY

## ULIBARRI GC # 2

**Unit Letter O, Section 35, T30N, R9W - API Number: 30-045-08894**

### Historical Release Cleanup Data (Figure 5)

| MAP DESIGNATION | SAMPLE ID | DEPTH | DATE | TIME | OVM (ppm) | TPH (ppm) | Benzene (ppm) | Total BTEX (ppm) | Chloride (ppm) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 38', S62W | 10'-12' | 02/15/13 | 1238 | 9.7 | ND | ND | ND | ND |
| 2 | 38', S46W | 10'-12' | 02/15/13 | 1241 | 330 | NA | NA | NA | NA |
| 3 | 38', S46W | 13' | 02/15/13 | 1248 | 47 | ND | ND | ND | ND |
| 4 | 67', S33W | 11'-13' | 02/19/13 | 1525 | 101 | ND | ND | ND | ND |
| 5 | 103'+115', S32W (2 pt. composite) | 11'-12' | 02/21/13 | 1555 | 111 | 11 | ND | ND | ND |
| 6 | 159', S33W | 11'-12' | 02/21/13 | 1617 | 358 | 950 | ND | 1.4 | ND |
| 7 | 143', S25W | 10' | 02/23/13 | 0940 | 0.0 | NA | NA | NA | NA |
| 8 | 143', S25W | 14' | 02/23/13 | 0943 | 0.0 | NA | NA | NA | NA |
| 9 | 168', S38W (South sidewall) | 10'-12' | 02/25/13 | 1138 | 0.0 | ND | ND | ND | ND |
| 10 | 179', S43W (South sidewall) | 10'-12' | 02/25/13 | 1140 | 0.0 | | | | |
| 11 | 190', S53W | 11'-13' | 02/27/13 | 1025 | 0.0 | ND | ND | ND | ND |
| 12 | 186.5', S57W (West Extent 3 pt comp) | 11'-13' | 02/27/13 | 1028 | 0.0 | | | | |
| 13 | 184', S61W (West Extent 3 pt comp) | 11'-13' | 02/27/13 | 1030 | 0.0 | | | | |
| 14 | 63', N74W | 11'-13' | 03/04/13 | 0901 | 0.0 | ND | ND | ND | ND |
| 15 | 94', N78W | 10'-12' | 03/07/13 | 1029 | 1.7 | ND | ND | ND | ND |
| 16 | 111', N80W | 11'-13' | 03/07/13 | 1034 | 42.5 | ND | ND | ND | ND |
| 17 | 146', S83.5W | 10'-12' | 03/08/13 | 1140 | NA | ND | ND | ND | ND |
| 18 | 180', S73W | 11'-13' | 03/11/13 | 1320 | 0.0 | ND | ND | ND | ND |
| 19 | 171', S88W | 11'-13' | 03/11/13 | 1335 | 0.0 | ND | ND | ND | ND |
| | NMOCD RELEASE CLOSURE STANDARDS (soils) - | | | | 100 | 100 | 10 | 50 | NA |

**Notes:**

DEPTH - Footage beneath the present ground surface grade.
OVM - Organic vapor meter or photo-ionization detector (PID).
TPH - Total petroleum hydrocarbons by US EPA Method 8015B.
BTEX - Benzene, toluene, ethylbenzene, total xylenes by US EPA Method 8021B.
ppm - Parts per million or milligram per kilogram (mg/Kg).
ND - Not detected at Reporting Limit.
NA - Not applicable or available
NMOCD - New Mexico Oil Conservation Division.
South sidewall 2-pt. comp - 2 point composite sample from Map Designations 9 & 10 grab samples.
West Extent 3-pt. comp - 3 point composite sample from Map Designations 11, 12, & 13 grab samples.

# BP AMERICA PRODUCTION COMPANY

## Ulibarri GC # 2

Unit Letter O, Section 35, T30N, R9W - API Number: 30-045-08894

### Field & Laboratory Data from Groundwater Monitor Wells

| | FIELD PARAMETERS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SAMPLE ID | SAMPLE DATE | SAMPLE TIME | DEPTH TO WATER (feet) | TOTAL MW LENGTH (feet) | pH | Conductivity (µmhos/cm) | Temperature (°Celcius) | Volume Purged (gallons) |
| MW # 1 | 04/29/13 | 1100 | 9.93 | 20.57 | 6.81 | 900 | 14.1 | 5.25 |
| MW # 4 | 04/29/13 | 1410 | 11.23 | 18.60 | 6.05 | 1,200 | 14.2 | 3.75 |
| MW # 5 | 04/29/13 | 1235 | 11.31 | 19.37 | 6.13 | 1,000 | 13.7 | 4.00 |
| MW # 6 | 04/29/13 | 1155 | 11.64 | 21.37 | 6.43 | 1,100 | 14.1 | 4.75 |
| | | | | NMWQCC STANDARDS - | 6 - 9 | | | |

| | LABORATORY PARAMETERS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE ID | Fluoride (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | Nitrate-Nitrite as N (mg/L) | Iron (mg/L) | TDS (mg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl - benzene (µg/L) | Total Xylenes (µg/L) |
| MW # 1 | 0.56 | 4.6 | 78 | ND | 1.8 | 570 | ND | ND | ND | ND |
| MW # 4 | 0.56 | 6.6 | 180 | ND | 45 | 870 | 2.3 | ND | 5.2 | 24 |
| MW # 5 | 0.57 | 4.9 | 160 | ND | 0.22 | 690 | ND | ND | ND | ND |
| MW # 6 | 0.70 | 8.8 | 170 | ND | 16 | 840 | ND | ND | ND | ND |
| NMWQCC STANDARDS - | 1.6 | 250 | 600 | 10 | 1.0 | 1,000 | 10 | 750 | 750 | 620 |

Notes: Depth to water measured from casing top of monitor well.

Groundwater standards are applied to values assigned in blue highlighted boxes or confirmed background levels, which ever is higher.

MW - Monitor well
µmhos/cm - Micromhos per centimeter
TDS - Total dissolved solids
mg/L - Milligram per Liter
µg/L - Microgram per liter
ND - Not detected at Reporting Limit
NMWQCC - New Mexico Water Quality Control Commission

# BP AMERICA PRODUCTION COMPANY

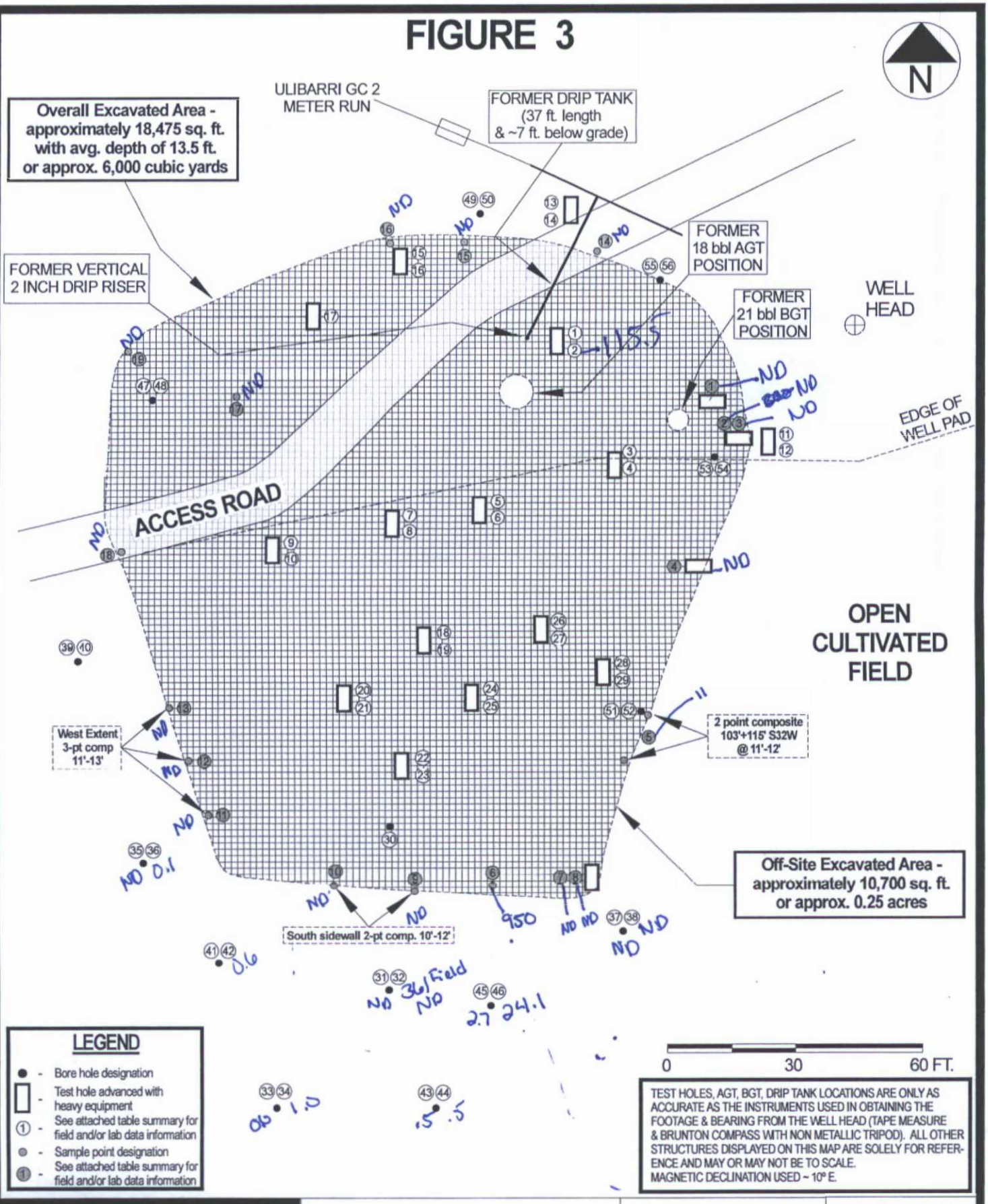
## ULIBARRI GC # 2

**Unit Letter O, Section 35, T30N, R9W - API Number: 30-045-08894**

### Historical Release Assessment Data (Figures 3 & 4)

| MAP DESIGNATION | SAMPLE ID | DEPTH | DATE | TIME | OVM (ppm) | TPH (ppm) | Benzene (ppm) | Total BTEX (ppm) | Chloride (ppm) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | TH #1 (70', S87W) | 5' | 06/26/12 | 1214 | 666 | NA | NA | NA | NA |
| 2 | TH #1 (70', S87W) | 7.5' | 06/26/12 | 1217 | 2,339 | 2,690 | ND | 115.5 | ND |
| 3 | TH #2 (65', S60W) | 5' | 06/26/12 | 1230 | 8.5 | NA | NA | NA | NA |
| 4 | TH #2 (65', S60W) | 7.5' | 06/26/12 | 1234 | 1,610 | 243 | ND | 2.3 | ND |
| 5 | TH #3 (98', S64W) | 5' | 06/26/12 | 1245 | 7.5 | NA | NA | NA | NA |
| 6 | TH #3 (98', S64W) | 7.5' | 06/26/12 | 1247 | 293 | 5.5 | ND | ND | ND |
| 7 | TH #4 (118', S67W) | 5' | 06/26/12 | 1301 | 0.0 | NA | NA | NA | NA |
| 8 | TH #4 (118', S67W) | 7.5' | 06/26/12 | 1304 | 305 | 118 | ND | ND | 23 |
| 9 | TH #5 (146', S69W) | 6' | 06/26/12 | 1313 | 0.0 | NA | NA | NA | NA |
| 10 | TH #5 (146', S69W) | 7.5' | 06/26/12 | 1318 | 6.4 | ND | ND | ND | ND |
| 11 | TH #6 (34', S37W) | 6' | 06/26/12 | 1324 | 0.0 | NA | NA | NA | NA |
| 12 | TH #6 (34', S37W) | 7.5' | 06/26/12 | 1327 | 0.0 | ND | ND | ND | ND |
| 13 | TH #7 (72', N68W) | 6' | 06/26/12 | 1348 | 0.0 | NA | NA | NA | NA |
| 14 | TH #7 (72', N68W) | 8' | 06/26/12 | 1423 | 0.0 | ND | ND | ND | ND |
| 15 | TH #8 (108', N82W) | 5' | 06/26/12 | 1441 | 0.0 | NA | NA | NA | NA |
| 16 | TH #8 (108', N82W) | 7.5' | 06/26/12 | 1445 | 0.0 | ND | ND | ND | ND |
| 17 | TH #9 (127', N89W) | 7.5' | 06/26/12 | 1455 | 0.0 | ND | ND | ND | ND |
| 18 | TH #10 (125', S54W) | 6' | 06/27/12 | 0919 | 0.0 | NA | NA | NA | NA |
| 19 | TH #10 (125', S54W) | 8' | 06/27/12 | 0924 | 1,174 | 580 | ND | ND | ND |
| 20 | TH #11 (148', S54W) | 6' | 06/27/12 | 0936 | 0.0 | NA | NA | NA | NA |
| 21 | TH #11 (148', S54W) | 7.5' | 06/27/12 | 0939 | 0.0 | ND | ND | ND | ND |
| 22 | TH #12 (148', S46W) | 6' | 06/27/12 | 0948 | 0.0 | NA | NA | NA | NA |
| 23 | TH #12 (148', S46W) | 7.5' | 06/27/12 | 0952 | 0.0 | ND | ND | ND | ND |
| 24 | TH #13 (125', S46W) | 6' | 06/27/12 | 0957 | 0.0 | NA | NA | NA | NA |
| 25 | TH #13 (125', S46W) | 7.5' | 06/27/12 | 0959 | 0.0 | ND | ND | ND | ND |
| 26 | TH #14 (102', S46W) | 6' | 06/27/12 | 1020 | 0.0 | NA | NA | NA | NA |
| 27 | TH #14 (102', S46W) | 8' | 06/27/12 | 1023 | 89 | 34 | ND | ND | ND |
| 28 | TH #15 (100', S36W) | 6' | 06/27/12 | 1037 | 0.0 | NA | NA | NA | NA |
| 29 | TH #15 (100', S36W) | 8' | 06/27/12 | 1040 | 0.0 | ND | ND | ND | ND |
| 30 | Sample (160', S43W) | 11' | 01/22/13 | 1158 | 307 | 990 | ND | 1.7 | ND |
| 31 | BH-1 (190.5', S35W) | 10' | 02/05/13 | 1134 | 1.5 | NA | NA | NA | NA |
| 32 | BH-1 (190.5', S35W) | 11'-13' | 02/05/13 | 1140 | 361 | NA | NA | NA | NA |

# FIGURE 3



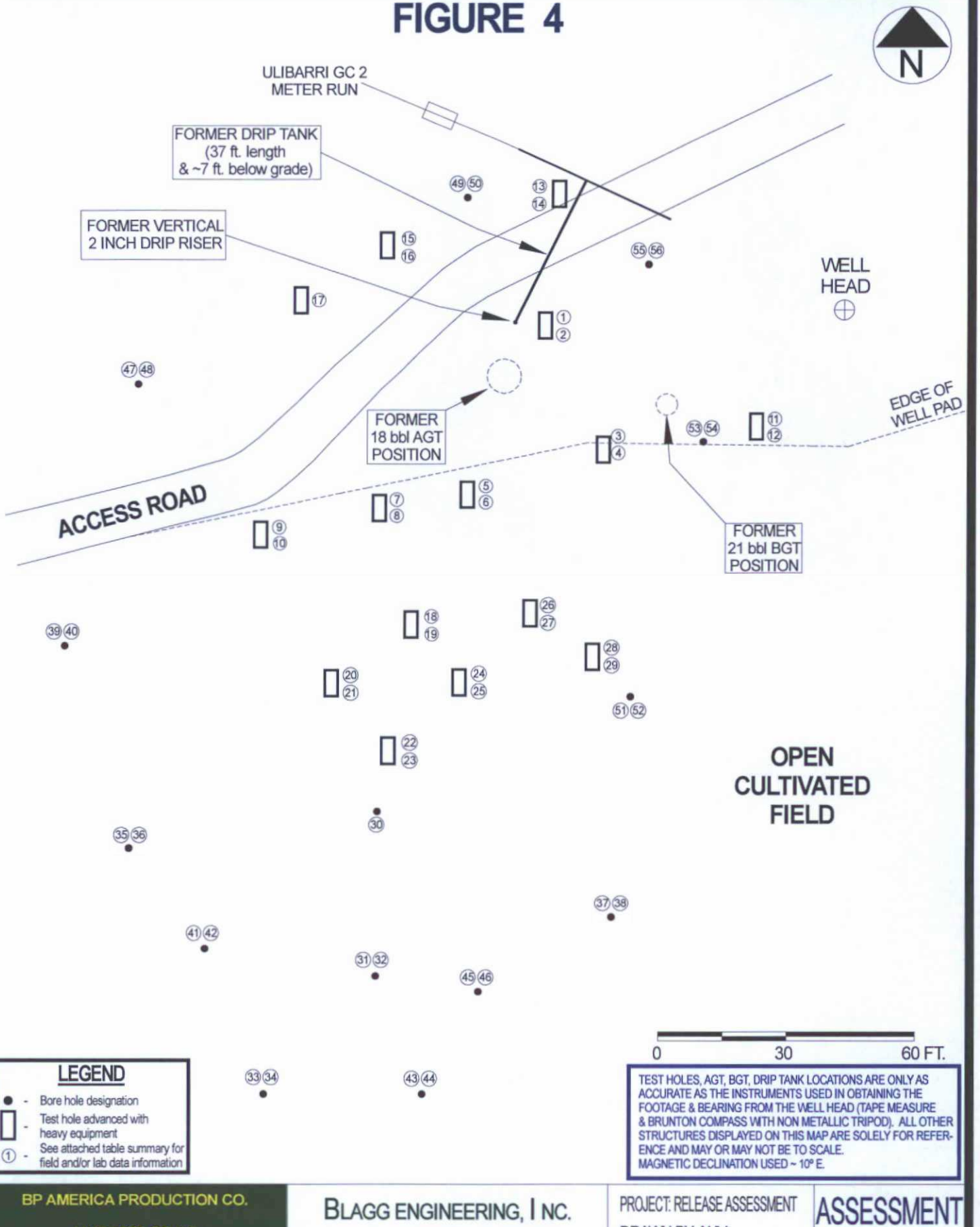

BP AMERICA PRODUCTION CO.
ULIBARRI GC # 2
SW/4 SE/4 SEC. 35, T30N, R9W
SAN JUAN COUNTY, NEW MEXICO


BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199


PROJECT: REMEDIATION CLEANUP
DRAWN BY: NJV
FILENAME: ULIBARRI GC 2-FIG3.SKF
REVISED: 12-31-15 NJV

REMEDIATION MAP
03/13

# FIGURE 4




**LEGEND**

- ● - Bore hole designation
- ▯ - Test hole advanced with heavy equipment
- ① - See attached table summary for field and/or lab data information

TEST HOLES, AGT, BGT, DRIP TANK LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE & BEARING FROM THE WELL HEAD (TAPE MEASURE & BRUNTON COMPASS WITH NON METALLIC TRIPOD). ALL OTHER STRUCTURES DISPLAYED ON THIS MAP ARE SOLELY FOR REFERENCE AND MAY OR MAY NOT BE TO SCALE.
MAGNETIC DECLINATION USED ~ 10° E.

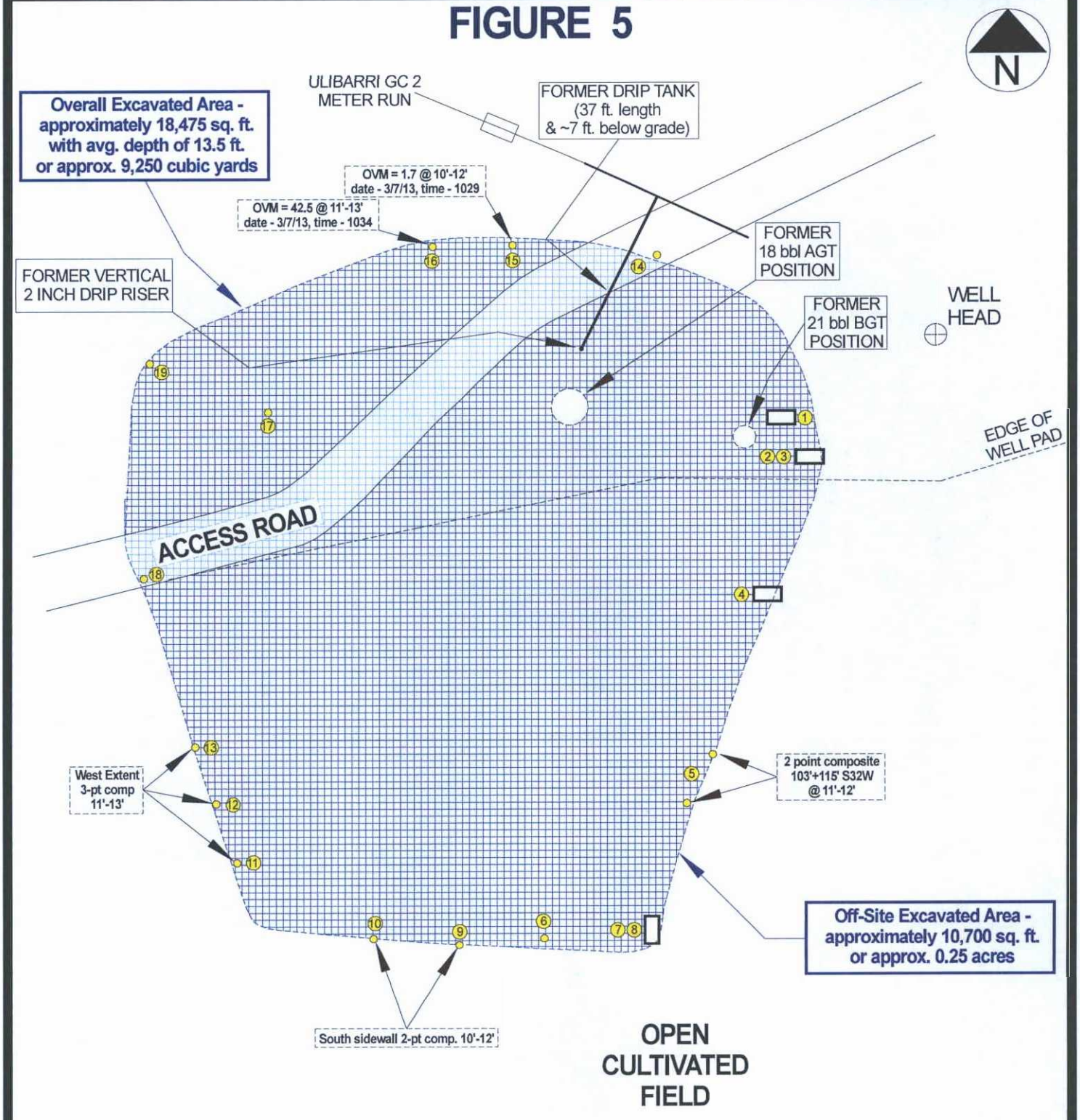
BP AMERICA PRODUCTION CO.
ULIBARRI GC # 2
SW/4 SE/4 SEC. 35, T30N, R9W
SAN JUAN COUNTY, NEW MEXICO


BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199


PROJECT: RELEASE ASSESSMENT
DRAWN BY: NJV
FILENAME: ULIBARRI GC 2-FIG4.SKF
REVISED: 12-31-15 NJV

ASSESSMENT MAP
03/13

# FIGURE 5




**LEGEND**

- ○ - Sample point designation
- ① - See attached table summary for field and/or lab data information

0 30 60 FT.

TEST HOLES, AGT, BGT, DRIP TANK LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE & BEARING FROM THE WELL HEAD (TAPE MEASURE & BRUNTON COMPASS WITH NON METALLIC TRIPOD). ALL OTHER STRUCTURES DISPLAYED ON THIS MAP ARE SOLELY FOR REFERENCE AND MAY OR MAY NOT BE TO SCALE.
MAGNETIC DECLINATION USED ~ 10° E.

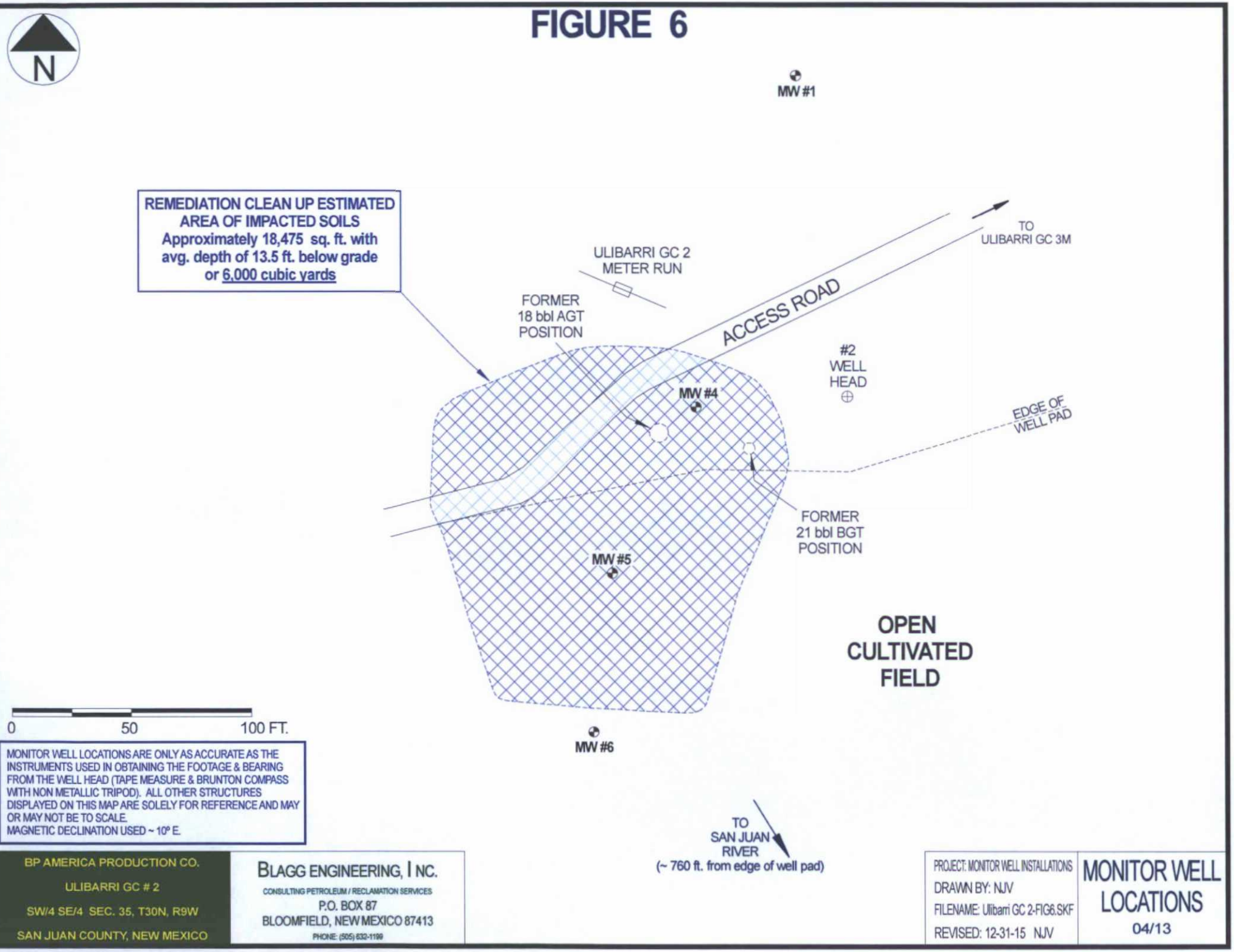
BP AMERICA PRODUCTION CO.
ULIBARRI GC # 2
SW/4 SE/4 SEC. 35, T30N, R9W
SAN JUAN COUNTY, NEW MEXICO


BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199


PROJECT: REMEDIATION CLEANUP
DRAWN BY: NJV
FILENAME: ULIBARRI GC 2-FIG5.SKF
REVISED: 12-31-15 NJV

**EXCAVATION MAP**
03/13

# FIGURE 6

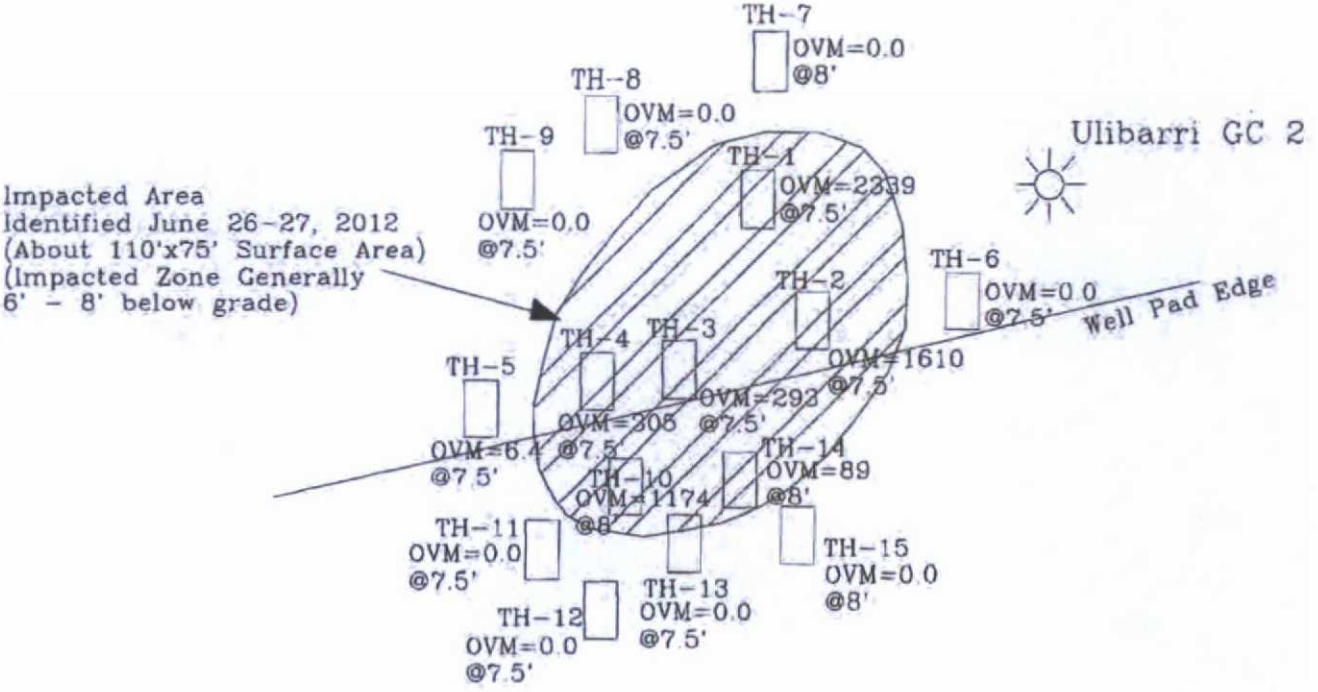



BP AMERICA PRODUCTION CO.
ULIBARRI GC # 2
SW/4 SE/4 SEC. 35, T30N, R9W
SAN JUAN COUNTY, NEW MEXICO


BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199


PROJECT: MONITOR WELL INSTALLATIONS
DRAWN BY: NJV
FILENAME: Ulibarri GC 2-FIG6.SKF
REVISED: 12-31-15 NJV

MONITOR WELL LOCATIONS
04/13




| SITE MAP<br>BP ** Ulibarri GC 2 ** (O)35-T30N-R9W | | | BLAGG ENGINEERING, INC. |
|---|---|---|---|
| DATE: 6/2012 | FIGURE 2 | BY: JCB | P.O. BOX 87, BLOOMFIELD, NM<br>PHONE: (505)632-1199 |

**Analytical Report**
Lab Order **1301716**
Date Reported: **1/25/2013**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1301716-001

**Client Sample ID:** 160'S43W @-11'
**Collection Date:** 1/22/2013 11:58:00 AM
**Matrix:** MEOH (SOIL) **Received Date:** 1/23/2013 10:05:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | 400 | 9.8 | | mg/Kg | 1 | 1/23/2013 11:26:21 AM |
| Surr: DNOP | 97.4 | 72.4-120 | | %REC | 1 | 1/23/2013 11:26:21 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 590 | 25 | | mg/Kg | 5 | 1/23/2013 1:15:05 PM |
| Surr: BFB | 795 | 84-116 | S | %REC | 5 | 1/23/2013 1:15:05 PM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.25 | | mg/Kg | 5 | 1/23/2013 1:15:05 PM |
| Toluene | ND | 0.25 | | mg/Kg | 5 | 1/23/2013 1:15:05 PM |
| Ethylbenzene | ND | 0.25 | | mg/Kg | 5 | 1/23/2013 1:15:05 PM |
| Xylenes, Total | 1.7 | 0.50 | | mg/Kg | 5 | 1/23/2013 1:15:05 PM |
| Surr: 4-Bromofluorobenzene | 150 | 80-120 | S | %REC | 5 | 1/23/2013 1:15:05 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 30 | | mg/Kg | 20 | 1/23/2013 11:00:33 AM |

**Qualifiers:**

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

**Analytical Report**
Lab Order **1301836**
Date Reported: **1/28/2013**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Client Sample ID:** M. Ulibarri Well
**Project:** Ulibarri GC 2
**Collection Date:** 1/24/2013 1:01:00 PM
**Lab ID:** 1301836-001
**Matrix:** AQUEOUS
**Received Date:** 1/25/2013 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 1.0 | | µg/L | 1 | 1/25/2013 6:42:33 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 1/25/2013 6:42:33 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 1/25/2013 6:42:33 PM |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 1/25/2013 6:42:33 PM |
| m,p-Xylene | ND | 1.0 | | µg/L | 1 | 1/25/2013 6:42:33 PM |
| o-Xylene | ND | 1.0 | | µg/L | 1 | 1/25/2013 6:42:33 PM |
| Surr: 4-Bromofluorobenzene | 90.9 | 69.7-152 | | %REC | 1 | 1/25/2013 6:42:33 PM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**Analytical Report**
Lab Order **1302592**
Date Reported: **2/21/2013**

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1302592-001

**Client Sample ID:** 38'S 62W @ 10'-12'
**Collection Date:** 2/15/2013 12:38:00 PM
**Matrix:** MEOH (SOIL) **Received Date:** 2/19/2013 9:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 2/20/2013 11:45:35 AM |
| Surr: DNOP | 107 | 72.4-120 | | %REC | 1 | 2/20/2013 11:45:35 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 2/19/2013 11:10:31 AM |
| Surr: BFB | 109 | 84-116 | | %REC | 1 | 2/19/2013 11:10:31 AM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.050 | | mg/Kg | 1 | 2/19/2013 11:10:31 AM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 2/19/2013 11:10:31 AM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 2/19/2013 11:10:31 AM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 2/19/2013 11:10:31 AM |
| Surr: 4-Bromofluorobenzene | 109 | 80-120 | | %REC | 1 | 2/19/2013 11:10:31 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 7.5 | | mg/Kg | 5 | 2/19/2013 10:57:14 AM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1302592-002
**Matrix:** MEOH (SOIL)
**Client Sample ID:** 38'S 46W @ 13'
**Collection Date:** 2/15/2013 12:48:00 PM
**Received Date:** 2/19/2013 9:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 2/20/2013 12:07:07 PM |
| Surr: DNOP | 110 | 72.4-120 | | %REC | 1 | 2/20/2013 12:07:07 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 2/19/2013 11:39:17 AM |
| Surr: BFB | 109 | 84-116 | | %REC | 1 | 2/19/2013 11:39:17 AM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.050 | | mg/Kg | 1 | 2/19/2013 11:39:17 AM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 2/19/2013 11:39:17 AM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 2/19/2013 11:39:17 AM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 2/19/2013 11:39:17 AM |
| Surr: 4-Bromofluorobenzene | 110 | 80-120 | | %REC | 1 | 2/19/2013 11:39:17 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 7.5 | | mg/Kg | 5 | 2/19/2013 11:22:04 AM |

**Qualifiers:**

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

**Analytical Report**
Lab Order **1302718**
Date Reported: **2/25/2013**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1302718-001 **Matrix:** SOIL

**Client Sample ID:** 67' S33W@11'-13'
**Collection Date:** 2/19/2013 3:25:00 PM
**Received Date:** 2/21/2013 10:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 2/25/2013 12:56:12 PM |
| Surr: DNOP | 89.4 | 72.4-120 | | %REC | 1 | 2/25/2013 12:56:12 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 2/22/2013 1:23:32 PM |
| Surr: BFB | 111 | 84-116 | | %REC | 1 | 2/22/2013 1:23:32 PM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.048 | | mg/Kg | 1 | 2/22/2013 1:23:32 PM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 2/22/2013 1:23:32 PM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 2/22/2013 1:23:32 PM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 2/22/2013 1:23:32 PM |
| Surr: 4-Bromofluorobenzene | 107 | 80-120 | | %REC | 1 | 2/22/2013 1:23:32 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 1.5 | | mg/Kg | 1 | 2/21/2013 1:36:23 PM |

**Qualifiers:**

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

**Analytical Report**
Lab Order **1302919**
Date Reported: **3/4/2013**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1302919-001 **Matrix:** SOIL

**Client Sample ID:** 103'+115' S32W @ 11'-12'
**Collection Date:** 2/21/2013 3:55:00 PM
**Received Date:** 2/28/2013 9:59:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | 11 | 10 | | mg/Kg | 1 | 3/1/2013 11:15:28 AM |
| Surr: DNOP | 111 | 72.4-120 | | %REC | 1 | 3/1/2013 11:15:28 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 3/1/2013 1:10:43 PM |
| Surr: BFB | 119 | 84-116 | S | %REC | 1 | 3/1/2013 1:10:43 PM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.047 | | mg/Kg | 1 | 3/1/2013 1:10:43 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 3/1/2013 1:10:43 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 3/1/2013 1:10:43 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 3/1/2013 1:10:43 PM |
| Surr: 4-Bromofluorobenzene | 109 | 80-120 | | %REC | 1 | 3/1/2013 1:10:43 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 7.5 | | mg/Kg | 5 | 3/1/2013 10:49:40 AM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Client Sample ID:** TH10 @ 8'
**Project:** Ulibarri GC 2
**Collection Date:** 6/27/2012 9:24:00 AM
**Lab ID:** 1206B93-010 **Matrix:** SOIL **Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | 380 | 9.8 | | mg/Kg | 1 | 6/30/2012 5:38:23 PM |
| Surr: DNOP | 109 | 77.6-140 | | %REC | 1 | 6/30/2012 5:38:23 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 15 | | mg/Kg | 10 | 7/3/2012 9:35:11 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.96 | | mg/Kg | 20 | 7/3/2012 4:31:49 PM |
| Toluene | ND | 0.96 | | mg/Kg | 20 | 7/3/2012 4:31:49 PM |
| Ethylbenzene | ND | 0.96 | | mg/Kg | 20 | 7/3/2012 4:31:49 PM |
| Xylenes, Total | ND | 1.9 | | mg/Kg | 20 | 7/3/2012 4:31:49 PM |
| Surr: 1,2-Dichloroethane-d4 | 77.4 | 70-130 | | %REC | 20 | 7/3/2012 4:31:49 PM |
| Surr: 4-Bromofluorobenzene | 105 | 70-130 | | %REC | 20 | 7/3/2012 4:31:49 PM |
| Surr: Dibromofluoromethane | 74.9 | 71.7-132 | | %REC | 20 | 7/3/2012 4:31:49 PM |
| Surr: Toluene-d8 | 88.3 | 70-130 | | %REC | 20 | 7/3/2012 4:31:49 PM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | 200 | 96 | | mg/Kg | 20 | 7/3/2012 4:31:49 PM |
| Surr: BFB | 105 | 70-130 | | %REC | 20 | 7/3/2012 4:31:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# BLAGG ENGINEERING, INC.

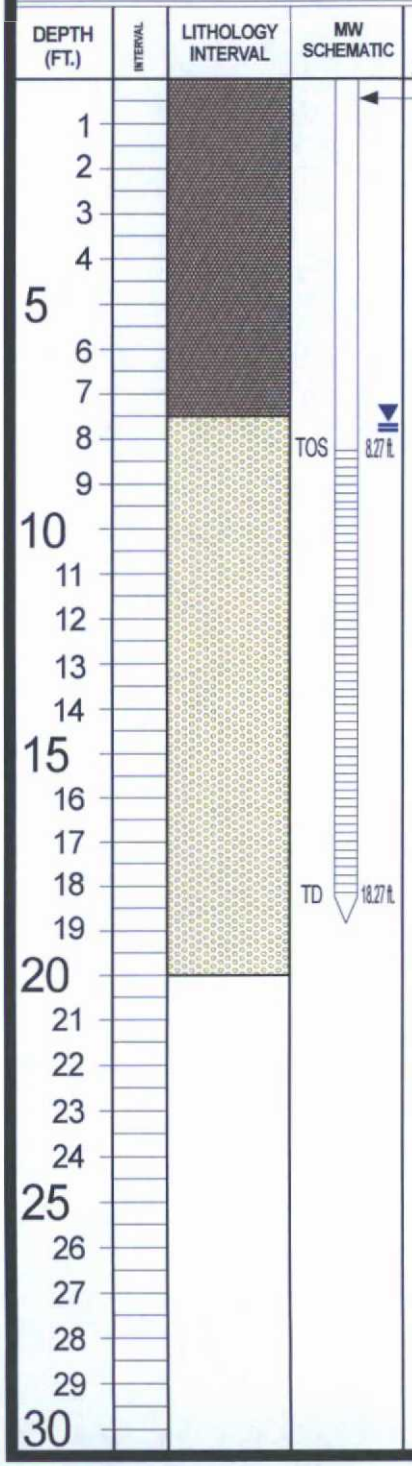
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199


# MW # 1

# BORE / TEST HOLE REPORT

| | |
|---|---|
| CLIENT: | BP AMERICA PRODUCTION CO. |
| LOCATION NAME: | ULIBARRI GC # 1A API # 3004522198 UNIT O, SEC. 35, T30N, R9W |
| CONTRACTOR: | BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC. |
| EQUIPMENT USED: | MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER |
| BORING LOCATION: | 137.5 FEET, N9W FROM ULIBARRI GC #2 WELL HEAD. |

| | |
|---|---|
| BORING #..... | BH - 1 |
| MW #..... | 1 |
| PAGE #..... | 1 |
| DATE STARTED | 03/22/13 |
| DATE FINISHED | 03/22/13 |
| OPERATOR..... | KP |
| LOGGED BY..... | NJV |




## FIELD CLASSIFICATION AND REMARKS

**TOP OF CASING APPROX. 2.30 FEET ABOVE GRADE.**

DARK YELLOWISH BROWN SILTY SAND TO SILTY CLAY, SLIGHTLY PLASTIC, SLIGHTLY MOIST TO MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 7.0 FEET BELOW GRADE).

**GROUNDWATER ~ 7.63 FEET BELOW GRADE ; MEASURED 04/29/13.**

PALE YELLOWISH BROWN SAND AND GRAVEL, NON COHESIVE, SATURATED, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (7.0 - 20.0 FEET BELOW GRADE).

TOTAL LENTGH OF PIPING - 20.57 FEET.

NOTES:

- SILTY SAND TO SILTY CLAY.
- SAND & GRAVEL.

**TOS** - Top of screen of monitor well.

**TD** - Total depth/bottom extent of monitor well.

**Monitor well consist of 2 inch PVC piping - casing from 2.30 feet above grade to 8.27 feet below grade, 0.020 slotted screen between 8.27 to 18.27 feet below grade, sand packed annular to 6.0 feet below grade, bentonite grout between 4.0 to 6.0 feet below grade, cuttings fill the remaining annular to grade. Secured casing top with steel well protector and padlock.**

DRAWING: ULIBARRI GC 1A & 2 MW-1 2013-03-22.SKF | DATE: 12/27/15 | DWN BY: NJV

# BLAGG ENGINEERING, INC.

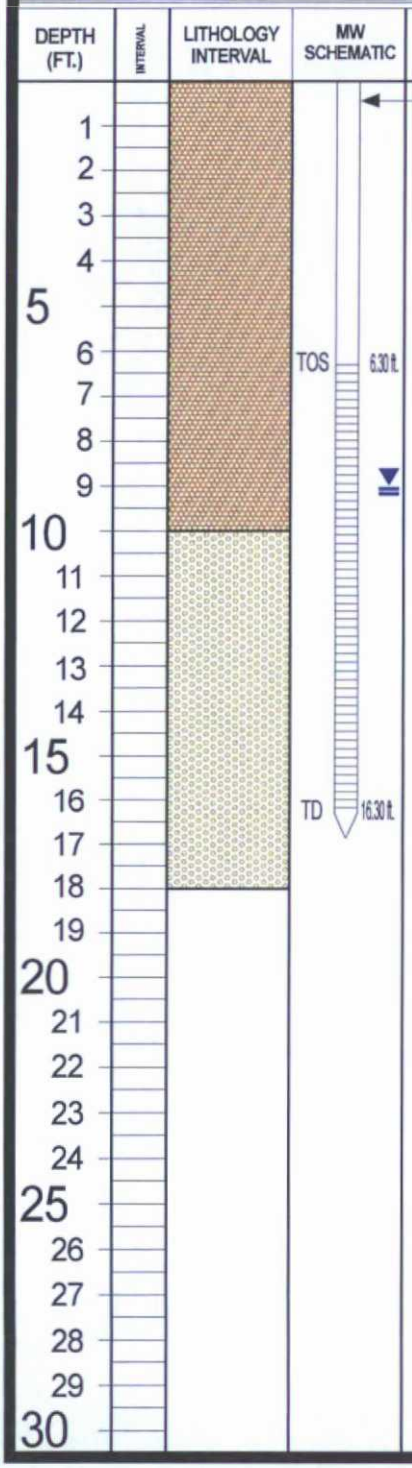
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199


# MW # 4

# BORE / TEST HOLE REPORT

| | |
|---|---|
| CLIENT: | BP AMERICA PRODUCTION CO. |
| LOCATION NAME: | ULIBARRI GC # 2 API # 3004508894 UNIT O, SEC. 35, T30N, R9W |
| CONTRACTOR: | BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC. |
| EQUIPMENT USED: | MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER |
| BORING LOCATION: | 64 FEET, S86E FROM ULIBARRI GC #2 WELL HEAD. |

| | |
|---|---|
| BORING #..... | BH - 3 |
| MW #..... | 4 |
| PAGE #..... | 4 |
| DATE STARTED | 03/22/13 |
| DATE FINISHED | 03/22/13 |
| OPERATOR..... | KP |
| LOGGED BY..... | NJV |




## FIELD CLASSIFICATION AND REMARKS

**TOP OF CASING APPROX. 2.30 FEET ABOVE GRADE.**

MODERATE YELLOWISH BROWN SILTY SAND (BACKFILL MATERIAL), NON COHESIVE, SLIGHTLY MOIST TO WET, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 10.0 FEET BELOW GRADE).

**GROUNDWATER ~ 8.93 FEET BELOW GRADE ; MEASURED 04/29/13.**

PALE YELLOWISH BROWN SAND AND GRAVEL, NON COHESIVE, WET TO SATURATED, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (10.0 - 18.0 FEET BELOW GRADE).

TOTAL LENTGH OF PIPING - 18.60 FEET.

NOTES:

- SILTY SAND (BACKFILL).
- SAND & GRAVEL.

**TOS** - Top of screen of monitor well.

**TD** - Total depth/bottom extent of monitor well.

**Monitor well consist of 2 inch PVC piping - casing from 2.30 feet above grade to 6.30 feet below grade, 0.020 slotted screen between 6.30 to 16.30 feet below grade, sand packed annular to 5.0 feet below grade, bentonite grout between 3.0 to 5.0 feet below grade, cuttings fill the remaining annular to grade. Secured casing top with steel well protector and padlock.**

DRAWING: ULIBARRI GC 1A & 2 MW-4 2013-03-22.SKF | DATE: 12/28/15 | DWN BY: NJV

# BLAGG ENGINEERING, INC.

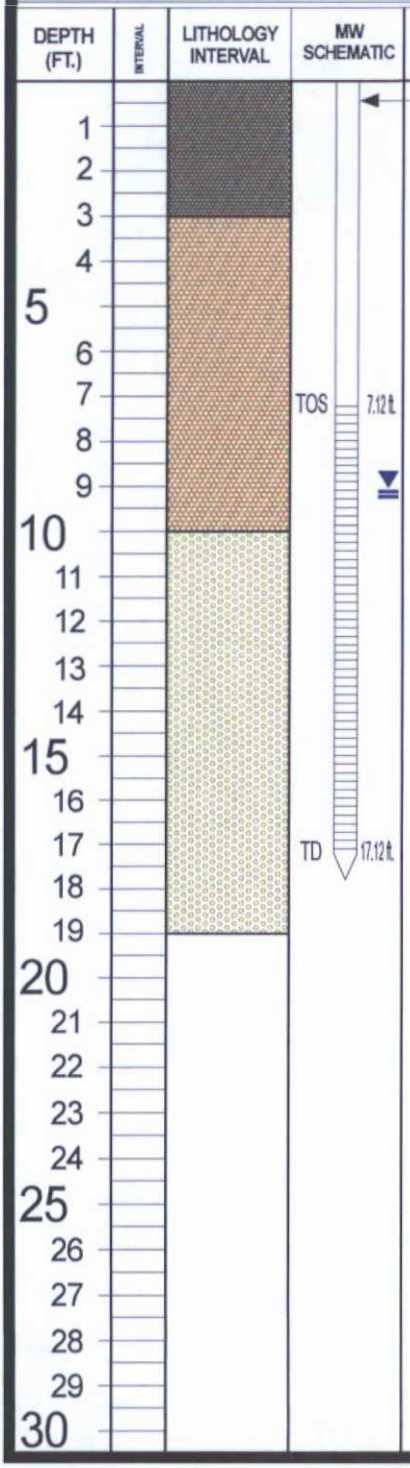
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199


# MW # 5

# BORE / TEST HOLE REPORT

| | |
|---|---|
| CLIENT: | BP AMERICA PRODUCTION CO. |
| LOCATION NAME: | ULIBARRI GC # 2 API # 3004508894 UNIT O, SEC. 35, T30N, R9W |
| CONTRACTOR: | BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC. |
| EQUIPMENT USED: | MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER |
| BORING LOCATION: | 124 FEET, S53W FROM ULIBARRI GC #2 WELL HEAD. |

| | |
|---|---|
| BORING #..... | BH - 5 |
| MW #..... | 5 |
| PAGE #..... | 5 |
| DATE STARTED | 03/25/13 |
| DATE FINISHED | 03/25/13 |
| OPERATOR..... | KP |
| LOGGED BY..... | NJV |




## FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

**TOP OF CASING APPROX. 2.25 FEET ABOVE GRADE.**

DARK YELLOWISH BROWN SILTY SAND TO SILTY CLAY (TOP SOIL REINTRODUCED), SLIGHTLY PLASTIC, SLIGHTLY MOIST TO MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 3.0 FEET BELOW GRADE).

MODERATE YELLOWISH BROWN SILTY SAND (BACKFILL MATERIAL), NON COHESIVE, SLIGHTLY MOIST TO WET, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (3.0 - 10.0 FEET BELOW GRADE).

**GROUNDWATER ~ 9.06 FEET BELOW GRADE ; MEASURED 04/29/13.**

PALE YELLOWISH BROWN SAND AND GRAVEL, NON COHESIVE, SATURATED, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (10.0 - 19.0 FEET BELOW GRADE).

TOTAL LENTGH OF PIPING - 19.37 FEET.

NOTES:

- SILTY SAND TO SILTY CLAY (TOP SOIL).
- SILTY SAND (BACKFILL).
- SAND & GRAVEL.

TOS - Top of screen of monitor well.

TD - Total depth/bottom extent of monitor well.

**Monitor well consist of 2 inch PVC piping - casing from 2.25 feet above grade to 7.12 feet below grade, 0.020 slotted screen between 7.12 to 17.12 feet below grade, sand packed annular to 5.0 feet below grade, bentonite grout between 3.0 to 5.0 feet below grade, cuttings fill the remaining annular to grade. Secured casing top with steel well protector and padlock.**

DRAWING: ULIBARRI GC 1A & 2 MW-5 2013-03-25.SKF | DATE: 12/28/15 | DWN BY: NJV

# BLAGG ENGINEERING, INC.

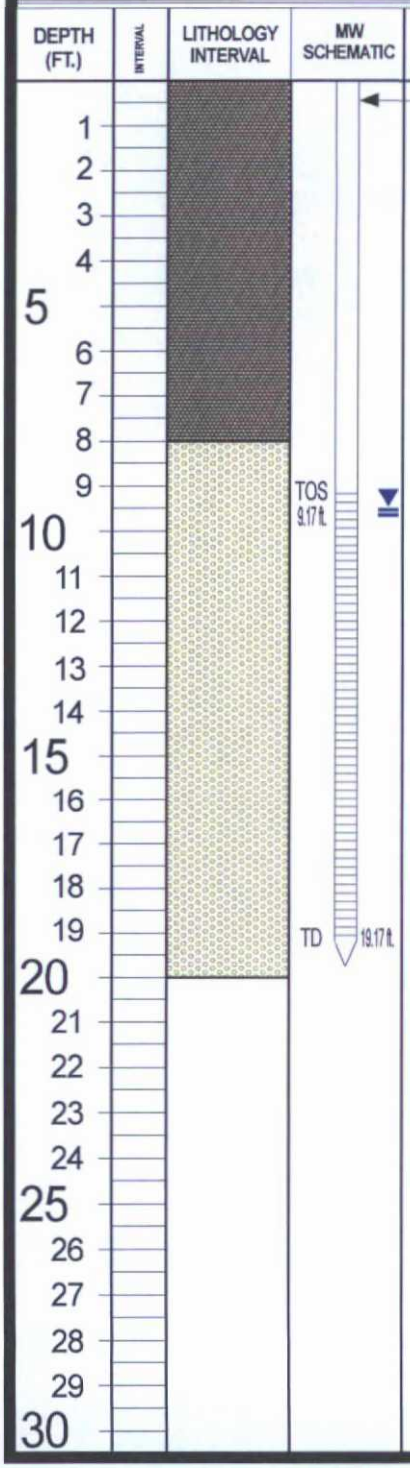
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199


# MW # 6

# BORE / TEST HOLE REPORT

| | |
|---|---|
| CLIENT: | BP AMERICA PRODUCTION CO. |
| LOCATION NAME: | ULIBARRI GC # 2 API # 3004508894 UNIT O, SEC. 35, T30N, R9W |
| CONTRACTOR: | BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC. |
| EQUIPMENT USED: | MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER |
| BORING LOCATION: | 175.25 FEET, S36W FROM ULIBARRI GC #2 WELL HEAD. |

| | |
|---|---|
| BORING #..... | BH - 6 |
| MW #..... | 6 |
| PAGE #..... | 6 |
| DATE STARTED | 03/25/13 |
| DATE FINISHED | 03/25/13 |
| OPERATOR..... | KP |
| LOGGED BY..... | NJV |




## FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

**TOP OF CASING APPROX. 2.20 FEET ABOVE GRADE.**

DARK YELLOWISH BROWN SILTY SAND TO SILTY CLAY, SLIGHTLY PLASTIC, SLIGHTLY MOIST TO MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 8.0 FEET BELOW GRADE).

**GROUNDWATER ~ 9.44 FEET BELOW GRADE ; MEASURED 04/29/13.**

PALE YELLOWISH BROWN SAND AND GRAVEL, NON COHESIVE, MOIST TO SATURATED, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (8.0 - 20.0 FEET BELOW GRADE).

TOTAL LENTGH OF PIPING - 21.37 FEET.

NOTES:

- SILTY SAND TO SILTY CLAY.
- SAND & GRAVEL.

TOS - Top of screen of monitor well.

TD - Total depth/bottom extent of monitor well.

**Monitor well consist of 2 inch PVC piping - casing from 2.20 feet above grade to 9.17 feet below grade, 0.020 slotted screen between 9.17 to 19.17 feet below grade, sand packed annular to 7.0 feet below grade, bentonite grout between 5.0 to 7.0 feet below grade, cuttings fill the remaining annular to grade. Secured casing top with steel well protector and padlock.**

DRAWING: ULIBARRI GC 1A & 2 MW-6 2013-03-25.SKF | DATE: 12/28/15 | DWN BY: NJV

# BLAGG ENGINEERING, INC.

## MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : **BP AMERICA PROD. CO.**

CHAIN-OF-CUSTODY # : **N / A**

**Ulibarri GC # 1A & # 2**
**UNIT O, SEC. 35, T30N, R9W**

LABORATORY (S) USED : **HALL ENVIRONMENTAL**

*Date :* **April 29, 2013**

DEVELOPER / SAMPLER : **N J V**

*Filename :* **Ulibarri GC 1A&2 mw log 04-29-13.xls**

PROJECT MANAGER : **J C B**

| WELL # | WELL ELEV. (ft) | WATER ELEV. (ft) | DEPTH TO WATER (ft) | TOTAL DEPTH (ft) | SAMPLING TIME | pH | CONDUCT (umhos) | TEMP. (celcius) | VOLUME PURGED (gal.) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 102.32 | 92.39 | 9.93 | 20.57 | 1100 | 6.81 | 900 | 14.1 | 5.25 |
| ~~2~~ | ~~102.84~~ | ~~90.98~~ | ~~11.86~~ | ~~21.70~~ | ~~1510~~ | ~~7.22~~ | ~~800~~ | ~~13.7~~ | ~~4.75~~ |
| ~~3~~ | ~~102.52~~ | ~~90.84~~ | ~~11.68~~ | ~~21.70~~ | ~~1520~~ | ~~8.00~~ | ~~1,000~~ | ~~14.0~~ | ~~5.00~~ |
| 4 | 102.48 | 91.25 | 11.23 | 18.60 | 1410 | 6.05 | 1,200 | 14.2 | 3.75 |
| 5 | 101.90 | 90.59 | 11.31 | 19.37 | 1235 | 6.13 | 1,000 | 13.7 | 4.00 |
| 6 | 101.97 | 90.33 | 11.64 | 21.37 | 1155 | 6.43 | 1,100 | 14.1 | 4.75 |

| INSTRUMENT CALIBRATIONS = | 4.01/7.00/10.00 | 2,800 |
|---|---|---|
| DATE & TIME = | 04/29/13 | 0700 |

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)
Ideally a minimum of three (3) wellbore volumes: 2.00 " well diameter = 0.49 gal. / ft. of water.

Comments or note well diameter if not standard 2 ".

Excellent recovery in all monitor wells (MWs). All MWs except MW #2 & #3 were brownish tint in appearance. MW #2 & #3 contained light gray tint appearance without an indication of hydrocarbon sheen within purged water. Collected samples for BTEX per US EPA Method 8021B and general chemistry analyses from all MWs. Purged wells using 2 inch submersible electrical pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing .

**Top of casing MW # 1 ~ 2.30 ft., MW # 2 ~ 2.40 ft., MW # 3 ~ 2.40 ft., MW # 4 ~ 2.30 ft., MW # 5 ~ 2.25 ft., MW # 6 ~ 2.20 ft. above grade.**

| | | | |
|---|---|---|---|
| on-site | 10:20 AM | temp | 64 F |
| off-site | 3:20 PM | temp | 82 F |
| sky cond. | | Sunny | |
| wind speed | 0 - 15 | direct. | SE - WNW |

**Analytical Report**
Lab Order **1206B93**
Date Reported: **7/11/2012**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1206B93-001 **Matrix:** SOIL

**Client Sample ID:** TH1 @ 7.5'
**Collection Date:** 6/26/2012 12:17:00 PM
**Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | 890 | 9.9 | | mg/Kg | 1 | 6/30/2012 1:51:12 PM |
| Surr: DNOP | 107 | 77.6-140 | | %REC | 1 | 6/30/2012 1:51:12 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 15 | | mg/Kg | 10 | 7/2/2012 3:04:48 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 2.5 | | mg/Kg | 50 | 6/30/2012 12:52:48 AM |
| Toluene | ND | 2.5 | | mg/Kg | 50 | 6/30/2012 12:52:48 AM |
| Ethylbenzene | 5.5 | 2.5 | | mg/Kg | 50 | 6/30/2012 12:52:48 AM |
| Xylenes, Total | 110 | 4.9 | | mg/Kg | 50 | 6/30/2012 12:52:48 AM |
| Surr: 1,2-Dichloroethane-d4 | 84.7 | 70-130 | | %REC | 50 | 6/30/2012 12:52:48 AM |
| Surr: 4-Bromofluorobenzene | 102 | 70-130 | | %REC | 50 | 6/30/2012 12:52:48 AM |
| Surr: Dibromofluoromethane | 81.4 | 71.7-132 | | %REC | 50 | 6/30/2012 12:52:48 AM |
| Surr: Toluene-d8 | 85.7 | 70-130 | | %REC | 50 | 6/30/2012 12:52:48 AM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | 1800 | 250 | | mg/Kg | 50 | 6/30/2012 12:52:48 AM |
| Surr: BFB | 102 | 70-130 | | %REC | 50 | 6/30/2012 12:52:48 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1206B93-002 **Matrix:** SOIL

**Client Sample ID:** TH2 @ 7.5'
**Collection Date:** 6/26/2012 12:34:00 PM
**Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | 63 | 10 | | mg/Kg | 1 | 6/30/2012 2:13:38 PM |
| Surr: DNOP | 102 | 77.6-140 | | %REC | 1 | 6/30/2012 2:13:38 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 15 | | mg/Kg | 10 | 7/2/2012 1:50:20 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.93 | | mg/Kg | 20 | 6/30/2012 1:20:25 AM |
| Toluene | ND | 0.93 | | mg/Kg | 20 | 6/30/2012 1:20:25 AM |
| Ethylbenzene | ND | 0.93 | | mg/Kg | 20 | 6/30/2012 1:20:25 AM |
| Xylenes, Total | 2.3 | 1.9 | | mg/Kg | 20 | 6/30/2012 1:20:25 AM |
| Surr: 1,2-Dichloroethane-d4 | 82.1 | 70-130 | | %REC | 20 | 6/30/2012 1:20:25 AM |
| Surr: 4-Bromofluorobenzene | 99.2 | 70-130 | | %REC | 20 | 6/30/2012 1:20:25 AM |
| Surr: Dibromofluoromethane | 78.5 | 71.7-132 | | %REC | 20 | 6/30/2012 1:20:25 AM |
| Surr: Toluene-d8 | 88.3 | 70-130 | | %REC | 20 | 6/30/2012 1:20:25 AM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | 180 | 93 | | mg/Kg | 20 | 6/30/2012 1:20:25 AM |
| Surr: BFB | 99.2 | 70-130 | | %REC | 20 | 6/30/2012 1:20:25 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1206B93-003 **Matrix:** SOIL

**Client Sample ID:** TH3 @ 7.5'
**Collection Date:** 6/26/2012 12:47:00 PM
**Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 6/30/2012 2:36:16 PM |
| Surr: DNOP | 102 | 77.6-140 | | %REC | 1 | 6/30/2012 2:36:16 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 15 | | mg/Kg | 10 | 7/2/2012 4:31:41 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 6/30/2012 1:48:03 AM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 6/30/2012 1:48:03 AM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 6/30/2012 1:48:03 AM |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 6/30/2012 1:48:03 AM |
| Surr: 1,2-Dichloroethane-d4 | 84.6 | 70-130 | | %REC | 1 | 6/30/2012 1:48:03 AM |
| Surr: 4-Bromofluorobenzene | 97.4 | 70-130 | | %REC | 1 | 6/30/2012 1:48:03 AM |
| Surr: Dibromofluoromethane | 84.1 | 71.7-132 | | %REC | 1 | 6/30/2012 1:48:03 AM |
| Surr: Toluene-d8 | 87.8 | 70-130 | | %REC | 1 | 6/30/2012 1:48:03 AM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | 5.5 | 4.9 | | mg/Kg | 1 | 6/30/2012 1:48:03 AM |
| Surr: BFB | 97.4 | 70-130 | | %REC | 1 | 6/30/2012 1:48:03 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1206B93-004 **Matrix:** SOIL

**Client Sample ID:** TH4 @ 7.5'
**Collection Date:** 6/26/2012 1:04:00 PM
**Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | 59 | 10 | | mg/Kg | 1 | 6/30/2012 2:58:52 PM |
| Surr: DNOP | 99.3 | 77.6-140 | | %REC | 1 | 6/30/2012 2:58:52 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | 23 | 15 | | mg/Kg | 10 | 7/2/2012 3:17:12 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.094 | | mg/Kg | 2 | 7/3/2012 12:03:31 AM |
| Toluene | ND | 0.094 | | mg/Kg | 2 | 7/3/2012 12:03:31 AM |
| Ethylbenzene | ND | 0.094 | | mg/Kg | 2 | 7/3/2012 12:03:31 AM |
| Xylenes, Total | ND | 0.19 | | mg/Kg | 2 | 7/3/2012 12:03:31 AM |
| Surr: 1,2-Dichloroethane-d4 | 85.2 | 70-130 | | %REC | 2 | 7/3/2012 12:03:31 AM |
| Surr: 4-Bromofluorobenzene | 128 | 70-130 | | %REC | 2 | 7/3/2012 12:03:31 AM |
| Surr: Dibromofluoromethane | 81.3 | 71.7-132 | | %REC | 2 | 7/3/2012 12:03:31 AM |
| Surr: Toluene-d8 | 84.9 | 70-130 | | %REC | 2 | 7/3/2012 12:03:31 AM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | 59 | 9.4 | | mg/Kg | 2 | 7/3/2012 12:03:31 AM |
| Surr: BFB | 128 | 70-130 | | %REC | 2 | 7/3/2012 12:03:31 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Client Sample ID:** TH5 @ 7.5'
**Project:** Ulibarri GC 2
**Collection Date:** 6/26/2012 1:18:00 PM
**Lab ID:** 1206B93-005 **Matrix:** SOIL **Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 6/30/2012 3:44:23 PM |
| Surr: DNOP | 90.7 | 77.6-140 | | %REC | 1 | 6/30/2012 3:44:23 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | 21 | 15 | | mg/Kg | 10 | 7/2/2012 5:21:20 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 7/3/2012 12:58:51 AM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 7/3/2012 12:58:51 AM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 7/3/2012 12:58:51 AM |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 7/3/2012 12:58:51 AM |
| Surr: 1,2-Dichloroethane-d4 | 83.1 | 70-130 | | %REC | 1 | 7/3/2012 12:58:51 AM |
| Surr: 4-Bromofluorobenzene | 92.9 | 70-130 | | %REC | 1 | 7/3/2012 12:58:51 AM |
| Surr: Dibromofluoromethane | 81.2 | 71.7-132 | | %REC | 1 | 7/3/2012 12:58:51 AM |
| Surr: Toluene-d8 | 91.5 | 70-130 | | %REC | 1 | 7/3/2012 12:58:51 AM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 7/3/2012 12:58:51 AM |
| Surr: BFB | 92.9 | 70-130 | | %REC | 1 | 7/3/2012 12:58:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1206B93-006 **Matrix:** SOIL

**Client Sample ID:** TH6 @ 7.5'
**Collection Date:** 6/26/2012 1:27:00 PM
**Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 6/30/2012 4:07:15 PM |
| Surr: DNOP | 98.5 | 77.6-140 | | %REC | 1 | 6/30/2012 4:07:15 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 15 | | mg/Kg | 10 | 7/2/2012 4:19:16 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.048 | | mg/Kg | 1 | 6/30/2012 3:11:44 AM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 6/30/2012 3:11:44 AM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 6/30/2012 3:11:44 AM |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 6/30/2012 3:11:44 AM |
| Surr: 1,2-Dichloroethane-d4 | 82.5 | 70-130 | | %REC | 1 | 6/30/2012 3:11:44 AM |
| Surr: 4-Bromofluorobenzene | 93.2 | 70-130 | | %REC | 1 | 6/30/2012 3:11:44 AM |
| Surr: Dibromofluoromethane | 84.0 | 71.7-132 | | %REC | 1 | 6/30/2012 3:11:44 AM |
| Surr: Toluene-d8 | 91.6 | 70-130 | | %REC | 1 | 6/30/2012 3:11:44 AM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 6/30/2012 3:11:44 AM |
| Surr: BFB | 93.2 | 70-130 | | %REC | 1 | 6/30/2012 3:11:44 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Client Sample ID:** TH7 @ 8'
**Project:** Ulibarri GC 2
**Collection Date:** 6/26/2012 2:23:00 PM
**Lab ID:** 1206B93-007 **Matrix:** SOIL **Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 6/30/2012 4:30:03 PM |
| Surr: DNOP | 99.6 | 77.6-140 | | %REC | 1 | 6/30/2012 4:30:03 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 7.5 | | mg/Kg | 5 | 7/2/2012 4:56:30 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.048 | | mg/Kg | 1 | 6/30/2012 3:39:38 AM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 6/30/2012 3:39:38 AM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 6/30/2012 3:39:38 AM |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 6/30/2012 3:39:38 AM |
| Surr: 1,2-Dichloroethane-d4 | 83.0 | 70-130 | | %REC | 1 | 6/30/2012 3:39:38 AM |
| Surr: 4-Bromofluorobenzene | 93.6 | 70-130 | | %REC | 1 | 6/30/2012 3:39:38 AM |
| Surr: Dibromofluoromethane | 82.5 | 71.7-132 | | %REC | 1 | 6/30/2012 3:39:38 AM |
| Surr: Toluene-d8 | 88.9 | 70-130 | | %REC | 1 | 6/30/2012 3:39:38 AM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 6/30/2012 3:39:38 AM |
| Surr: BFB | 93.6 | 70-130 | | %REC | 1 | 6/30/2012 3:39:38 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Client Sample ID:** TH8 @ 7.5'
**Project:** Ulibarri GC 2
**Collection Date:** 6/26/2012 2:45:00 PM
**Lab ID:** 1206B93-008 **Matrix:** SOIL **Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 6/30/2012 4:52:54 PM |
| Surr: DNOP | 97.6 | 77.6-140 | | %REC | 1 | 6/30/2012 4:52:54 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 7.5 | | mg/Kg | 5 | 7/3/2012 2:08:24 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.048 | | mg/Kg | 1 | 6/30/2012 4:07:28 AM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 6/30/2012 4:07:28 AM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 6/30/2012 4:07:28 AM |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 6/30/2012 4:07:28 AM |
| Surr: 1,2-Dichloroethane-d4 | 81.1 | 70-130 | | %REC | 1 | 6/30/2012 4:07:28 AM |
| Surr: 4-Bromofluorobenzene | 93.7 | 70-130 | | %REC | 1 | 6/30/2012 4:07:28 AM |
| Surr: Dibromofluoromethane | 79.9 | 71.7-132 | | %REC | 1 | 6/30/2012 4:07:28 AM |
| Surr: Toluene-d8 | 88.2 | 70-130 | | %REC | 1 | 6/30/2012 4:07:28 AM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 6/30/2012 4:07:28 AM |
| Surr: BFB | 93.7 | 70-130 | | %REC | 1 | 6/30/2012 4:07:28 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1206B93-009 **Matrix:** SOIL

**Client Sample ID:** TH9 @ 7.5'
**Collection Date:** 6/26/2012 2:55:00 PM
**Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 6/30/2012 5:15:37 PM |
| Surr: DNOP | 102 | 77.6-140 | | %REC | 1 | 6/30/2012 5:15:37 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 7.5 | | mg/Kg | 5 | 7/3/2012 2:58:03 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 4:03:59 PM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 4:03:59 PM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 4:03:59 PM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 7/3/2012 4:03:59 PM |
| Surr: 1,2-Dichloroethane-d4 | 78.8 | 70-130 | | %REC | 1 | 7/3/2012 4:03:59 PM |
| Surr: 4-Bromofluorobenzene | 88.6 | 70-130 | | %REC | 1 | 7/3/2012 4:03:59 PM |
| Surr: Dibromofluoromethane | 78.0 | 71.7-132 | | %REC | 1 | 7/3/2012 4:03:59 PM |
| Surr: Toluene-d8 | 89.5 | 70-130 | | %REC | 1 | 7/3/2012 4:03:59 PM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 7/3/2012 4:03:59 PM |
| Surr: BFB | 88.6 | 70-130 | | %REC | 1 | 7/3/2012 4:03:59 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Client Sample ID:** TH11 @ 7.5'
**Project:** Ulibarri GC 2
**Collection Date:** 6/27/2012 9:39:00 AM
**Lab ID:** 1206B93-011
**Matrix:** SOIL
**Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 6/30/2012 6:00:59 PM |
| Surr: DNOP | 108 | 77.6-140 | | %REC | 1 | 6/30/2012 6:00:59 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 15 | | mg/Kg | 10 | 7/2/2012 4:44:06 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 5:55:24 PM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 5:55:24 PM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 5:55:24 PM |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 7/3/2012 5:55:24 PM |
| Surr: 1,2-Dichloroethane-d4 | 80.3 | 70-130 | | %REC | 1 | 7/3/2012 5:55:24 PM |
| Surr: 4-Bromofluorobenzene | 88.4 | 70-130 | | %REC | 1 | 7/3/2012 5:55:24 PM |
| Surr: Dibromofluoromethane | 79.3 | 71.7-132 | | %REC | 1 | 7/3/2012 5:55:24 PM |
| Surr: Toluene-d8 | 93.7 | 70-130 | | %REC | 1 | 7/3/2012 5:55:24 PM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 7/3/2012 5:55:24 PM |
| Surr: BFB | 88.4 | 70-130 | | %REC | 1 | 7/3/2012 5:55:24 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1206B93-012 **Matrix:** SOIL

**Client Sample ID:** TH12 @ 7.5'
**Collection Date:** 6/27/2012 9:52:00 AM
**Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 6/30/2012 6:23:42 PM |
| Surr: DNOP | 101 | 77.6-140 | | %REC | 1 | 6/30/2012 6:23:42 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 1.5 | | mg/Kg | 1 | 7/2/2012 3:54:26 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 6:23:07 PM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 6:23:07 PM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 6:23:07 PM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 7/3/2012 6:23:07 PM |
| Surr: 1,2-Dichloroethane-d4 | 80.9 | 70-130 | | %REC | 1 | 7/3/2012 6:23:07 PM |
| Surr: 4-Bromofluorobenzene | 89.2 | 70-130 | | %REC | 1 | 7/3/2012 6:23:07 PM |
| Surr: Dibromofluoromethane | 80.7 | 71.7-132 | | %REC | 1 | 7/3/2012 6:23:07 PM |
| Surr: Toluene-d8 | 89.8 | 70-130 | | %REC | 1 | 7/3/2012 6:23:07 PM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 7/3/2012 6:23:07 PM |
| Surr: BFB | 89.2 | 70-130 | | %REC | 1 | 7/3/2012 6:23:07 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1206B93-013 **Matrix:** SOIL

**Client Sample ID:** TH13 @ 7.5'
**Collection Date:** 6/27/2012 9:59:00 AM
**Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 6/30/2012 6:46:16 PM |
| Surr: DNOP | 107 | 77.6-140 | | %REC | 1 | 6/30/2012 6:46:16 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 15 | | mg/Kg | 10 | 7/2/2012 8:15:08 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.047 | | mg/Kg | 1 | 7/3/2012 6:50:51 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 7/3/2012 6:50:51 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 7/3/2012 6:50:51 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 7/3/2012 6:50:51 PM |
| Surr: 1,2-Dichloroethane-d4 | 79.7 | 70-130 | | %REC | 1 | 7/3/2012 6:50:51 PM |
| Surr: 4-Bromofluorobenzene | 90.5 | 70-130 | | %REC | 1 | 7/3/2012 6:50:51 PM |
| Surr: Dibromofluoromethane | 77.1 | 71.7-132 | | %REC | 1 | 7/3/2012 6:50:51 PM |
| Surr: Toluene-d8 | 89.2 | 70-130 | | %REC | 1 | 7/3/2012 6:50:51 PM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 7/3/2012 6:50:51 PM |
| Surr: BFB | 90.5 | 70-130 | | %REC | 1 | 7/3/2012 6:50:51 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Client Sample ID:** TH14 @ 8'
**Project:** Ulibarri GC 2
**Collection Date:** 6/27/2012 10:23:00 AM
**Lab ID:** 1206B93-014 **Matrix:** SOIL **Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | 15 | 10 | | mg/Kg | 1 | 6/30/2012 7:08:57 PM |
| Surr: DNOP | 106 | 77.6-140 | | %REC | 1 | 6/30/2012 7:08:57 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 7.5 | | mg/Kg | 5 | 7/2/2012 6:23:24 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 7/3/2012 7:18:32 PM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 7/3/2012 7:18:32 PM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 7/3/2012 7:18:32 PM |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 7/3/2012 7:18:32 PM |
| Surr: 1,2-Dichloroethane-d4 | 86.2 | 70-130 | | %REC | 1 | 7/3/2012 7:18:32 PM |
| Surr: 4-Bromofluorobenzene | 110 | 70-130 | | %REC | 1 | 7/3/2012 7:18:32 PM |
| Surr: Dibromofluoromethane | 82.2 | 71.7-132 | | %REC | 1 | 7/3/2012 7:18:32 PM |
| Surr: Toluene-d8 | 83.9 | 70-130 | | %REC | 1 | 7/3/2012 7:18:32 PM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | 19 | 4.9 | | mg/Kg | 1 | 7/3/2012 7:18:32 PM |
| Surr: BFB | 110 | 70-130 | | %REC | 1 | 7/3/2012 7:18:32 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Client Sample ID:** TH15 @ 8'
**Project:** Ulibarri GC 2
**Collection Date:** 6/27/2012 10:40:00 AM
**Lab ID:** 1206B93-015 **Matrix:** SOIL **Received Date:** 6/28/2012 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JMP** |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 6/30/2012 7:54:05 PM |
| Surr: DNOP | 107 | 77.6-140 | | %REC | 1 | 6/30/2012 7:54:05 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **BRM** |
| Chloride | ND | 15 | | mg/Kg | 10 | 7/2/2012 5:33:44 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 8:13:50 PM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 8:13:50 PM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 7/3/2012 8:13:50 PM |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 7/3/2012 8:13:50 PM |
| Surr: 1,2-Dichloroethane-d4 | 81.6 | 70-130 | | %REC | 1 | 7/3/2012 8:13:50 PM |
| Surr: 4-Bromofluorobenzene | 91.9 | 70-130 | | %REC | 1 | 7/3/2012 8:13:50 PM |
| Surr: Dibromofluoromethane | 81.2 | 71.7-132 | | %REC | 1 | 7/3/2012 8:13:50 PM |
| Surr: Toluene-d8 | 91.7 | 70-130 | | %REC | 1 | 7/3/2012 8:13:50 PM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 7/3/2012 8:13:50 PM |
| Surr: BFB | 91.9 | 70-130 | | %REC | 1 | 7/3/2012 8:13:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| */X | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | Spike Recovery outside accepted recovery limits | U | Samples with CalcVal < MDL |

**Analytical Report**
Lab Order **1305026**
Date Reported: **5/16/2013**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Client Sample ID:** MW # 1
**Project:** ULIBARRI GC # 1A/#2
**Collection Date:** 4/29/2013 11:00:00 AM
**Lab ID:** 1305026-001
**Matrix:** AQUEOUS
**Received Date:** 5/1/2013 9:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 1.0 | | µg/L | 1 | 5/3/2013 12:28:43 AM | R10280 |
| Toluene | ND | 1.0 | | µg/L | 1 | 5/3/2013 12:28:43 AM | R10280 |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 5/3/2013 12:28:43 AM | R10280 |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 5/3/2013 12:28:43 AM | R10280 |
| Surr: 4-Bromofluorobenzene | 99.0 | 69.4-129 | | %REC | 1 | 5/3/2013 12:28:43 AM | R10280 |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** | |
| Fluoride | 0.56 | 0.10 | | mg/L | 1 | 5/1/2013 9:36:57 PM | R10269 |
| Chloride | 4.6 | 0.50 | | mg/L | 1 | 5/1/2013 9:36:57 PM | R10269 |
| Sulfate | 78 | 10 | | mg/L | 20 | 5/2/2013 6:43:21 PM | R10292 |
| Nitrate+Nitrite as N | ND | 1.0 | | mg/L | 5 | 5/2/2013 11:53:36 PM | R10292 |
| **EPA METHOD 200.7: DISSOLVED METALS** | | | | | | Analyst: **JLF** | |
| Iron | 1.8 | 0.10 | * | mg/L | 5 | 5/9/2013 1:11:30 PM | R10516 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** | |
| Total Dissolved Solids | 570 | 200 | * | mg/L | 1 | 5/5/2013 5:03:00 PM | 7282 |

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 |
| P | Sample pH greater than 2 for VOA and TOC only. | R | RPD outside accepted recovery limits |
| RL | Reporting Detection Limit | S | Spike Recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Client Sample ID:** MW # 4
**Project:** ULIBARRI GC # 1A/#2
**Collection Date:** 4/29/2013 2:10:00 PM
**Lab ID:** 1305026-004
**Matrix:** AQUEOUS
**Received Date:** 5/1/2013 9:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | 2.3 | 1.0 | | µg/L | 1 | 5/3/2013 1:59:25 AM | R10280 |
| Toluene | ND | 1.0 | | µg/L | 1 | 5/3/2013 1:59:25 AM | R10280 |
| Ethylbenzene | 5.2 | 1.0 | | µg/L | 1 | 5/3/2013 1:59:25 AM | R10280 |
| Xylenes, Total | 24 | 2.0 | | µg/L | 1 | 5/3/2013 1:59:25 AM | R10280 |
| Surr: 4-Bromofluorobenzene | 154 | 69.4-129 | S | %REC | 1 | 5/3/2013 1:59:25 AM | R10280 |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** | |
| Fluoride | 0.56 | 0.10 | | mg/L | 1 | 5/1/2013 11:16:15 PM | R10269 |
| Chloride | 6.6 | 0.50 | | mg/L | 1 | 5/1/2013 11:16:15 PM | R10269 |
| Sulfate | 180 | 10 | | mg/L | 20 | 5/2/2013 7:20:35 PM | R10292 |
| Nitrate+Nitrite as N | ND | 1.0 | | mg/L | 5 | 5/3/2013 12:30:50 AM | R10292 |
| **EPA METHOD 200.7: DISSOLVED METALS** | | | | | | Analyst: **JLF** | |
| Iron | 45 | 2.0 | * | mg/L | 100 | 5/9/2013 1:18:19 PM | R10516 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** | |
| Total Dissolved Solids | 870 | 200 | * | mg/L | 1 | 5/5/2013 5:03:00 PM | 7282 |

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 |
| P | Sample pH greater than 2 for VOA and TOC only. | R | RPD outside accepted recovery limits |
| RL | Reporting Detection Limit | S | Spike Recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Client Sample ID:** MW # 5
**Project:** ULIBARRI GC # 1A/#2
**Collection Date:** 4/29/2013 12:35:00 PM
**Lab ID:** 1305026-005 **Matrix:** AQUEOUS **Received Date:** 5/1/2013 9:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 1.0 | | µg/L | 1 | 5/3/2013 2:29:44 AM | R10280 |
| Toluene | ND | 1.0 | | µg/L | 1 | 5/3/2013 2:29:44 AM | R10280 |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 5/3/2013 2:29:44 AM | R10280 |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 5/3/2013 2:29:44 AM | R10280 |
| Surr: 4-Bromofluorobenzene | 104 | 69.4-129 | | %REC | 1 | 5/3/2013 2:29:44 AM | R10280 |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** | |
| Fluoride | 0.57 | 0.10 | | mg/L | 1 | 5/1/2013 11:41:03 PM | R10269 |
| Chloride | 4.9 | 0.50 | | mg/L | 1 | 5/1/2013 11:41:03 PM | R10269 |
| Sulfate | 160 | 10 | | mg/L | 20 | 5/2/2013 7:33:00 PM | R10292 |
| Nitrate+Nitrite as N | ND | 1.0 | | mg/L | 5 | 5/3/2013 12:43:15 AM | R10292 |
| **EPA METHOD 200.7: DISSOLVED METALS** | | | | | | Analyst: **JLF** | |
| Iron | 0.22 | 0.020 | | mg/L | 1 | 5/9/2013 1:20:32 PM | R10516 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** | |
| Total Dissolved Solids | 690 | 100 | * | mg/L | 1 | 5/5/2013 5:03:00 PM | 7282 |

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 |
| P | Sample pH greater than 2 for VOA and TOC only. | R | RPD outside accepted recovery limits |
| RL | Reporting Detection Limit | S | Spike Recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** ULIBARRI GC # 1A/#2
**Lab ID:** 1305026-006 **Matrix:** AQUEOUS

**Client Sample ID:** MW # 6
**Collection Date:** 4/29/2013 11:55:00 AM
**Received Date:** 5/1/2013 9:50:00 AM

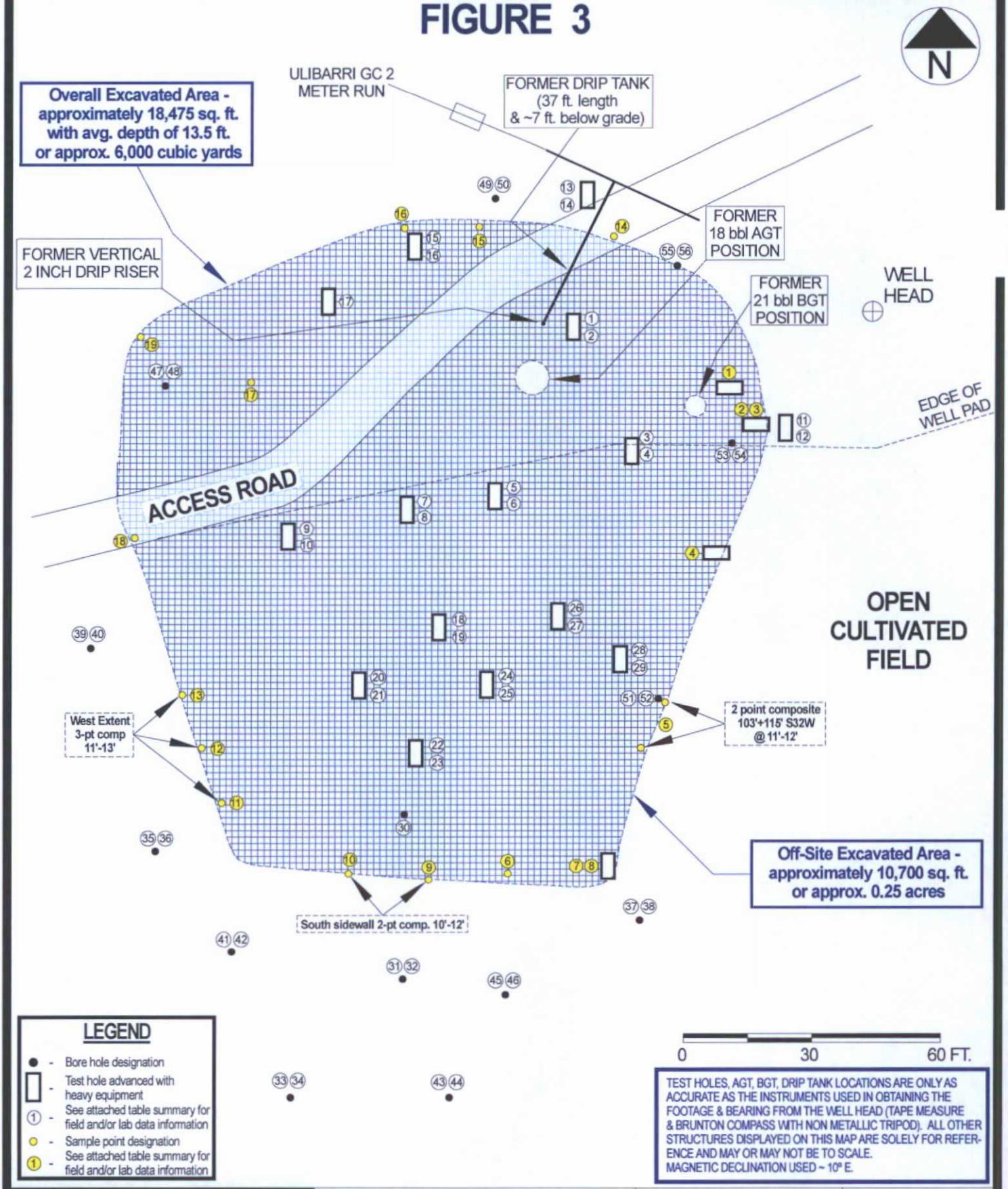
| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 1.0 | | µg/L | 1 | 5/3/2013 2:59:49 AM | R10280 |
| Toluene | ND | 1.0 | | µg/L | 1 | 5/3/2013 2:59:49 AM | R10280 |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 5/3/2013 2:59:49 AM | R10280 |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 5/3/2013 2:59:49 AM | R10280 |
| Surr: 4-Bromofluorobenzene | 99.7 | 69.4-129 | | %REC | 1 | 5/3/2013 2:59:49 AM | R10280 |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** | |
| Fluoride | 0.70 | 0.10 | | mg/L | 1 | 5/2/2013 12:05:53 AM | R10269 |
| Chloride | 8.8 | 0.50 | | mg/L | 1 | 5/2/2013 12:05:53 AM | R10269 |
| Sulfate | 170 | 10 | | mg/L | 20 | 5/2/2013 7:45:24 PM | R10292 |
| Nitrate+Nitrite as N | ND | 1.0 | | mg/L | 5 | 5/3/2013 12:55:40 AM | R10292 |
| **EPA METHOD 200.7: DISSOLVED METALS** | | | | | | Analyst: **JLF** | |
| Iron | 16 | 0.40 | * | mg/L | 20 | 5/9/2013 1:22:55 PM | R10516 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** | |
| Total Dissolved Solids | 840 | 200 | * | mg/L | 1 | 5/5/2013 5:03:00 PM | 7282 |

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 |
| P | Sample pH greater than 2 for VOA and TOC only. | R | RPD outside accepted recovery limits |
| RL | Reporting Detection Limit | S | Spike Recovery outside accepted recovery limits |

# FIGURE 3




BP AMERICA PRODUCTION CO.

ULIBARRI GC # 2

SW/4 SE/4 SEC. 35, T30N, R9W

SAN JUAN COUNTY, NEW MEXICO


BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199


PROJECT: REMEDIATION CLEANUP

DRAWN BY: NJV

FILENAME: ULIBARRI GC 2-FIG3.SKF

REVISED: 12-31-15 NJV

REMEDIATION MAP

03/13

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1302919-002 **Matrix:** SOIL

**Client Sample ID:** 159' S33E @ 11'-12'
**Collection Date:** 2/21/2013 4:17:00 PM
**Received Date:** 2/28/2013 9:59:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | 320 | 10 | | mg/Kg | 1 | 3/1/2013 12:20:48 PM |
| Surr: DNOP | 103 | 72.4-120 | | %REC | 1 | 3/1/2013 12:20:48 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 630 | 46 | | mg/Kg | 10 | 3/2/2013 12:40:29 AM |
| Surr: BFB | 366 | 84-116 | S | %REC | 10 | 3/2/2013 12:40:29 AM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.46 | | mg/Kg | 10 | 3/2/2013 12:40:29 AM |
| Toluene | ND | 0.46 | | mg/Kg | 10 | 3/2/2013 12:40:29 AM |
| Ethylbenzene | ND | 0.46 | | mg/Kg | 10 | 3/2/2013 12:40:29 AM |
| Xylenes, Total | 1.4 | 0.93 | | mg/Kg | 10 | 3/2/2013 12:40:29 AM |
| Surr: 4-Bromofluorobenzene | 122 | 80-120 | S | %REC | 10 | 3/2/2013 12:40:29 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 7.5 | | mg/Kg | 5 | 3/1/2013 11:14:28 AM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1302919-003 **Matrix:** SOIL

**Client Sample ID:** South Sidewall 2-pt comp. 10'-12
**Collection Date:** 2/25/2013 11:40:00 AM
**Received Date:** 2/28/2013 9:59:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 3/1/2013 12:42:29 PM |
| Surr: DNOP | 101 | 72.4-120 | | %REC | 1 | 3/1/2013 12:42:29 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 3/1/2013 2:08:22 PM |
| Surr: BFB | 113 | 84-116 | | %REC | 1 | 3/1/2013 2:08:22 PM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.046 | | mg/Kg | 1 | 3/1/2013 2:08:22 PM |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 3/1/2013 2:08:22 PM |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 3/1/2013 2:08:22 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 3/1/2013 2:08:22 PM |
| Surr: 4-Bromofluorobenzene | 108 | 80-120 | | %REC | 1 | 3/1/2013 2:08:22 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 7.5 | | mg/Kg | 5 | 3/1/2013 11:39:18 AM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1302919-004 **Matrix:** SOIL

**Client Sample ID:** West Extent 3-pt comp 11'-13'
**Collection Date:** 2/27/2013 10:30:00 AM
**Received Date:** 2/28/2013 9:59:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 3/1/2013 11:40:02 AM |
| Surr: DNOP | 113 | 72.4-120 | | %REC | 1 | 3/1/2013 11:40:02 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 3/1/2013 2:37:08 PM |
| Surr: BFB | 112 | 84-116 | | %REC | 1 | 3/1/2013 2:37:08 PM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 3/1/2013 2:37:08 PM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 3/1/2013 2:37:08 PM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 3/1/2013 2:37:08 PM |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 3/1/2013 2:37:08 PM |
| Surr: 4-Bromofluorobenzene | 109 | 80-120 | | %REC | 1 | 3/1/2013 2:37:08 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 7.5 | | mg/Kg | 5 | 3/1/2013 12:04:06 PM |

**Qualifiers:**

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

**Analytical Report**
Lab Order **1303189**
Date Reported: **3/8/2013**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1303189-001 **Matrix:** SOIL

**Client Sample ID:** 63' N74W @ 11'-13'
**Collection Date:** 3/4/2013 9:01:00 AM
**Received Date:** 3/6/2013 9:53:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 3/7/2013 11:45:28 AM |
| Surr: DNOP | 90.7 | 72.4-120 | | %REC | 1 | 3/7/2013 11:45:28 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 3/7/2013 11:14:18 AM |
| Surr: BFB | 110 | 84-116 | | %REC | 1 | 3/7/2013 11:14:18 AM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 3/7/2013 11:14:18 AM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 3/7/2013 11:14:18 AM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 3/7/2013 11:14:18 AM |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 3/7/2013 11:14:18 AM |
| Surr: 4-Bromofluorobenzene | 109 | 80-120 | | %REC | 1 | 3/7/2013 11:14:18 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 7.5 | | mg/Kg | 5 | 3/7/2013 12:03:45 PM |

**Qualifiers:**

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

**Analytical Report**
Lab Order **1303382**
Date Reported: **3/14/2013**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1303382-001 **Matrix:** SOIL

**Client Sample ID:** 94' N78W @ 11'-12'
**Collection Date:** 3/7/2013 10:29:00 AM
**Received Date:** 3/8/2013 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 3/11/2013 12:20:26 PM |
| Surr: DNOP | 106 | 72.4-120 | | %REC | 1 | 3/11/2013 12:20:26 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 30 | | mg/Kg | 20 | 3/11/2013 11:48:52 AM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.050 | | mg/Kg | 1 | 3/8/2013 8:36:20 PM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 3/8/2013 8:36:20 PM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 3/8/2013 8:36:20 PM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 3/8/2013 8:36:20 PM |
| Surr: 1,2-Dichloroethane-d4 | 89.7 | 70-130 | | %REC | 1 | 3/8/2013 8:36:20 PM |
| Surr: 4-Bromofluorobenzene | 96.4 | 70-130 | | %REC | 1 | 3/8/2013 8:36:20 PM |
| Surr: Dibromofluoromethane | 95.1 | 70-130 | | %REC | 1 | 3/8/2013 8:36:20 PM |
| Surr: Toluene-d8 | 103 | 70-130 | | %REC | 1 | 3/8/2013 8:36:20 PM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 3/8/2013 8:36:20 PM |
| Surr: BFB | 96.4 | 70-130 | | %REC | 1 | 3/8/2013 8:36:20 PM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1303382-002 **Matrix:** SOIL

**Client Sample ID:** 111' N80W @ 11'-13'
**Collection Date:** 3/7/2013 10:34:00 AM
**Received Date:** 3/8/2013 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 3/11/2013 12:42:20 PM |
| Surr: DNOP | 106 | 72.4-120 | | %REC | 1 | 3/11/2013 12:42:20 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 30 | | mg/Kg | 20 | 3/11/2013 12:26:05 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.050 | | mg/Kg | 1 | 3/8/2013 9:05:12 PM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 3/8/2013 9:05:12 PM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 3/8/2013 9:05:12 PM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 3/8/2013 9:05:12 PM |
| Surr: 1,2-Dichloroethane-d4 | 89.4 | 70-130 | | %REC | 1 | 3/8/2013 9:05:12 PM |
| Surr: 4-Bromofluorobenzene | 89.4 | 70-130 | | %REC | 1 | 3/8/2013 9:05:12 PM |
| Surr: Dibromofluoromethane | 93.9 | 70-130 | | %REC | 1 | 3/8/2013 9:05:12 PM |
| Surr: Toluene-d8 | 97.7 | 70-130 | | %REC | 1 | 3/8/2013 9:05:12 PM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 3/8/2013 9:05:12 PM |
| Surr: BFB | 89.4 | 70-130 | | %REC | 1 | 3/8/2013 9:05:12 PM |

**Qualifiers:**

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

**Analytical Report**
Lab Order **1303448**
Date Reported: **3/18/2013**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC 2
**Lab ID:** 1303448-001

**Client Sample ID:** 146' S83.5W @ 10'-12'
**Collection Date:** 3/8/2013 11:40:00 AM
**Matrix:** MEOH (SOIL) **Received Date:** 3/12/2013 9:53:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | ND | 14 | | mg/Kg | 1 | 3/15/2013 11:19:01 AM |
| Surr: DNOP | 112 | 72.4-120 | | %REC | 1 | 3/15/2013 11:19:01 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 1.5 | | mg/Kg | 1 | 3/12/2013 7:54:41 PM |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** |
| Benzene | ND | 0.050 | | mg/Kg | 1 | 3/13/2013 1:09:00 PM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 3/13/2013 1:09:00 PM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 3/13/2013 1:09:00 PM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 3/13/2013 1:09:00 PM |
| Surr: 1,2-Dichloroethane-d4 | 87.7 | 70-130 | | %REC | 1 | 3/13/2013 1:09:00 PM |
| Surr: 4-Bromofluorobenzene | 85.6 | 70-130 | | %REC | 1 | 3/13/2013 1:09:00 PM |
| Surr: Dibromofluoromethane | 92.6 | 70-130 | | %REC | 1 | 3/13/2013 1:09:00 PM |
| Surr: Toluene-d8 | 101 | 70-130 | | %REC | 1 | 3/13/2013 1:09:00 PM |
| **EPA METHOD 8015B MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 3/13/2013 1:09:00 PM |
| Surr: BFB | 85.6 | 70-130 | | %REC | 1 | 3/13/2013 1:09:00 PM |

**Qualifiers:**

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

**Analytical Report**
Lab Order **1303582**
Date Reported: **3/19/2013**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC #2
**Lab ID:** 1303582-001 **Matrix:** SOIL

**Client Sample ID:** 180', S73W@11'-13'
**Collection Date:** 3/11/2013 1:20:00 PM
**Received Date:** 3/14/2013 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 3/17/2013 11:31:14 AM |
| Surr: DNOP | 109 | 72.4-120 | | %REC | 1 | 3/17/2013 11:31:14 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 3/17/2013 2:38:32 AM |
| Surr: BFB | 90.6 | 84-116 | | %REC | 1 | 3/17/2013 2:38:32 AM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.047 | | mg/Kg | 1 | 3/17/2013 2:38:32 AM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 3/17/2013 2:38:32 AM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 3/17/2013 2:38:32 AM |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 3/17/2013 2:38:32 AM |
| Surr: 4-Bromofluorobenzene | 95.1 | 80-120 | | %REC | 1 | 3/17/2013 2:38:32 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 1.5 | | mg/Kg | 1 | 3/18/2013 11:57:45 AM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** Ulibarri GC #2
**Lab ID:** 1303582-002 **Matrix:** SOIL

**Client Sample ID:** 171', S88W@11'-13'
**Collection Date:** 3/11/2013 1:35:00 PM
**Received Date:** 3/14/2013 10:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **MMD** |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 3/17/2013 11:58:29 AM |
| Surr: DNOP | 110 | 72.4-120 | | %REC | 1 | 3/17/2013 11:58:29 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 3/17/2013 4:08:15 AM |
| Surr: BFB | 92.0 | 84-116 | | %REC | 1 | 3/17/2013 4:08:15 AM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** |
| Benzene | ND | 0.048 | | mg/Kg | 1 | 3/17/2013 4:08:15 AM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 3/17/2013 4:08:15 AM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 3/17/2013 4:08:15 AM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 3/17/2013 4:08:15 AM |
| Surr: 4-Bromofluorobenzene | 97.6 | 80-120 | | %REC | 1 | 3/17/2013 4:08:15 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JRR** |
| Chloride | ND | 1.5 | | mg/Kg | 1 | 3/18/2013 12:22:33 PM |

**Qualifiers:**

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

# Chain-of-Custody Record

Client: BLAGG ENGINEERING INC.
BP AMERICA
Mailing Address: P.O. BOX 87
BLOOMFIELD NM 87413
Phone #: 505-632-1199
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: ULIBARRI GC 2
Project #:
Project Manager: J. BLAGG
Sampler: J. BLAGG
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

**Analysis Request**

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1206393 | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions (F,Cl,$NO_3$,$NO_2$,$PO_4$,$SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6/26/12 | 1217 | SOIL | TH 1 @ 7½' | 4oz x 1 | COOL | -001 | X | | X | | | | | | | | | X | | | | |
| " | 1234 | " | TH 2 @ 7½' | " | " | -002 | X | | X | | | | | | | | | X | | | | |
| " | 1247 | " | TH 3 @ 7½' | " | " | -003 | X | | X | | | | | | | | | X | | | | |
| " | 1304 | " | TH 4 @ 7½' | " | " | -004 | X | | X | | | | | | | | | X | | | | |
| " | 1318 | " | TH 5 @ 7½' | " | " | -005 | X | | X | | | | | | | | | X | | | | |
| " | 1327 | " | TH 6 @ 7½' | " | " | -006 | X | | X | | | | | | | | | X | | | | |
| " | 1423 | " | TH 7 @ 8' | " | " | -007 | X | | X | | | | | | | | | X | | | | |
| " | 1445 | " | TH 8 @ 7½' | " | " | -008 | X | | X | | | | | | | | | X | | | | |
| " | 1455 | " | TH 9 @ 7½' | " | " | -009 | X | | X | | | | | | | | | X | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | PAGE 1 of 2 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 6/27/12 | 1541 | Jeff Blagg | Christine Walters | 6/27/12 | 1541 |
| 6/27/12 | 1759 | Christine Walters | | 06/28/12 | 1000 |

Remarks: GRO + DRO ON 8015
WORKORDER: N1578707
PK: ZPEACEJDENV
CONTACT: JEFF PEACE

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

# Chain-of-Custody Record

Client: Blagg Engineering Inc.
B.P. America
Mailing Address: P.O. Box 87
Bloomfield NM 87413
Phone #: 505-632-1199
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Ulibarri GC 2
Project #:
Project Manager: J. Blagg
Sampler: J. Blagg
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1206393 | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions ($F,Cl,NO_3,NO_2,PO_4,SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6/27/12 | 0924 | Soil | TH 10 @ 8' | 4 oz x1 | Cool | -010 | X | | X | | | | | | | | | X | | | | |
| " | 0939 | " | TH 11 @ 7½' | " | " | -011 | X | | X | | | | | | | | | X | | | | |
| " | 0952 | " | TH 12 @ 7½' | " | " | -012 | X | | X | | | | | | | | | X | | | | |
| " | 0959 | " | TH 13 @ 7½' | " | " | -013 | X | | X | | | | | | | | | X | | | | |
| " | 1023 | " | TH 14 @ 8' | " | " | -014 | X | | X | | | | | | | | | X | | | | |
| " | 1040 | " | TH 15 @ 8' | " | " | -015 | X | | X | | | | | | | | | X | | | | |

PAGE 2 of 2

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 6/27/12 | 1541 | JH Blagg | Christine Walters | 6/27/12 | 1541 |
| 6/27/12 | 1759 | Christine Walters | | 06/28/12 | 1000 |

Remarks: GRO + DRO on Soil
WORKORDER: N1578707
PK: ZPEACEJOEN.
CONTACT: Jeff Peace

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# Chain-of-Custody Record

Client: BLAGG ENGINEERING INC.
BP AMERICA
Mailing Address: P.O. Box 87
BLOOMFIELD, NM 87413
Phone #: 505-632-1199
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time: ASAP, by WED Afternoon 1/23/2013 IF Possible
☐ Standard ☒ Rush
Project Name: ULIBARRI GC 2
Project #:
Project Manager: J. BLAGG
Sampler: J. BLAGG
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0


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


| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1301716 | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions ($F,Cl,NO_3,NO_2,PO_4,SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/22/13 | 1158 | SOIL | 160'S43W @ -11' | 4 oz x1 | COOL | -001 | X | | X | | | | | | | | | X | | | | |

Analysis Request

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 1/22/13 | 1445 | Jeff Blagg | Christine Walters | 1/22/13 | 1445 |
| 1/22/13 | 1648 | Christine Walters | | 01/23/13 | 10:05 |

Remarks: GRO + DRO ON 8015B
BILL BLAGG
BP Contact: JEFF PEACE

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# Chain-of-Custody Record

Client: BLAGG ENGINEERING INC.
BP AMERICA
Mailing Address: P.O. BOX 87
BLOOMFIELD NM 87413
Phone #: 505-632-1199
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time: BY WED
☐ Standard ☒ Rush 1/30/2013
Project Name: ULIBARRI GC 2
Project #:
Project Manager: J. BLAGG
Sampler: J. BLAGG
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

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4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1301834 | BTEX + ~~MTBE + TMB's~~ (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions ($F,Cl,NO_3,NO_2,PO_4,SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/24/13 | 1301 | WATER | M. ULIBARRI WELL | 3 x VOA | $HgCl_2$ | -001 | X | | | | | | | | | | | |

Date: 1/24/2013 Time: 1457 Relinquished by: Jeff Blagg
Received by: Christine Walker Date: 1/24/2013 Time: 1457
Remarks: BILL BLAGG

Date: 1/24/13 Time: 1756 Relinquished by: Christine Walker
Received by: 01/25/13 10:00
BP CONTACT: JEFF PEACE

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# Chain-of-Custody Record

Client: BLAGG ENGINEERING INC.
BP AMERICA
Mailing Address: P.O. BOX 87
BLOOMFIELD NM 87413
Phone #: 505-632-1199
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time: By WED 2/20/2013 Afternoon
☐ Standard ☒ Rush
Project Name: ULIBARRI GC 2
Project #:
Project Manager: J. BLAGG
Sampler: J. BLAGG
On Ice: ☑ Yes ☐ No
Sample Temperature: 1.3


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


**Analysis Request**

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No | BTEX + ~~MTBE + TMB~~'s (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/15/13 | 1238 | SOIL | 38'S 62W @ 10'-12' | 4oz x 1 Mesh Kit | CORE | 1302592-001 | X | | X | | | | | | | | | X | | | | |
| " | 1248 | " | 38'S 46W @ 13' | " | " | -002 | X | | X | | | | | | | | | X | | | | |

Date: 2/18/13 Time: 1555 Relinquished by: J. C. Blagg Received by: Christine Walters Date: 2/18/13 Time: 1555
Date: 2/18/13 Time: 1740 Relinquished by: Christine Walters Received by: 02/19/13 0950

Remarks: GRO + DRO ON BOTH
BILL BLAGG
BP CONTACT: JEFF PEACE

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

# Chain-of-Custody Record

Client: BLAGG ENGINEERING INC.
BP AMERICA
Mailing Address: P.O. Box 87
BLOOMFIELD, NM 87413
Phone #: 505-632-1199
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time: BY MONDAY 2/25/2013
☐ Standard ☒ Rush
Project Name: ULIBARRI GC 2
Project #:
Project Manager: J. BLAGG
Sampler: J. BLAGG
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0


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www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107


Analysis Request

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1302718 | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions ($F,Cl,NO_3,NO_2,PO_4,SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/19/2013 | 1525 | SOIL | 67' S 33W @ 11'-13' | 4 oz x 1 | COOL | -001 | X | | X | | | | | | | | | X | |

Date: 2/20/2013 Time: 1545 Relinquished by: Jeff Blagg
Received by: Christine Walker Date: 2/21/2013 Time: 1545

Date: 2/20/13 Time: 1754 Relinquished by: Christine Walker
Received by: 02/21/13 10:45

Remarks: GRO + DRO ON 8015
BILL BLAGG
BP CONTACT: JEFF PEACE

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# Chain-of-Custody Record

Client: BLAGG ENGINEERING INC.
BP AMERICA
Mailing Address: P.O. BOX 87
BLOOMFIELD NM 87413
Phone #: 505-632-1199
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time: BY MONDAY 3/4/2013
☐ Standard ☒ Rush
Project Name: ULIBARRI GC 2
Project #:
Project Manager: J. BLAGG
Sampler: J. BLAGG
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1302919 | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions ($F,Cl,NO_3,NO_2,PO_4,SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/21/13 | 1555 | SOIL | 103' + 115' S32W @ 11'-12' | 4oz x 1 | COOL | -001 | X | | X | | | | | | | | | X | | | | |
| " | 1617 | " | 159' S33E @ 11'-12' | " | " | -002 | X | | X | | | | | | | | | X | | | | |
| 2/25/13 | 1140 | " | SOUTH SIDEWALL 2-pt comp. 10'-12' | " | " | -003 | X | | X | | | | | | | | | X | | | | |
| 2/27/13 | 1030 | " | WEST EXTENT 3-pt comp 11'-13' | " | " | -004 | X | | X | | | | | | | | | X | | | | |

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 2/27/13 | 1430 | [signature] | [signature] | 2/27/13 | 1430 |
| 2/27/13 | 1720 | Christine Walker | [signature] | 02/28/13 | 09:59 |

Remarks: GRO + DRO ON 8015 B
BILL BLAGG
BP contact: Jeff Peace

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# Chain-of-Custody Record

Client: BLAGG ENGINEERING INC.
BP AMERICA
Mailing Address: P.O. BOX 87
BLOOMFIELD NM 87413
Phone #: 505-632-1199
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time: By Monday 3-11-2013
☒ Standard ☐ Rush _____
Project Name: ULIBARRI GC 2
Project #:
Project Manager: J. BLAGG
Sampler: J. BLAGG
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

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4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

**Analysis Request**

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1303189 | BTEX + ~~MTBE~~ + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions ($F,Cl,NO_3,NO_2,PO_4,SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/4/13 | 0901 | SOIL | 63' N74W @ 11'-13' | 4oz x1 | COOL | -001 | X | | X | | | | | | | | | X | | | | |

| Date | Time | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 3/5/13 | 1405 | | Christine Walker | 3/5/13 | 1405 |
| 3/5/13 | 1740 | Christine Walker | | 03/06/13 | 0953 |

Remarks: GRO + DRO ON 8015B
BILL BLAGG
BP Contact: Jeff Peace

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

# Chain-of-Custody Record

Client: Blagg Engineering Inc.
BP America
Mailing Address: P.O. Box 87
Bloomfield NM 87413
Phone #: 505-632-1199
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time: By Monday 3/4/2013
☐ Standard ☒ Rush
Project Name: Ullibarri GC 2
Project #:
Project Manager: J. Blagg
Sampler: J. Blagg
On Ice: ☑ Yes ☐ No
Sample Temperature: 1.0


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**
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4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107


Analysis Request

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1303392 | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions ($F,Cl,NO_3,NO_2,PO_4,SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | Chloride | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/3/13 | 1029 | SOIL | 94'N78W@11'-12' | 4oz x1 | cool | 001 | X | | X | | | | | | | | | X | | | | |
| " | 1034 | " | 111'N80W@11'-13' | " | " | 002 | X | | X | | | | | | | | | X | | | | |

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 3/3/13 | 1504 | Jeff Blagg | Christine Walker | 3/3/13 | 1504 |
| 3/7/13 | 1758 | Chris Walla | Missi Ga | 03/08/13 | 10:00 |

Remarks:
Bill Blagg
BP Contact: Jeff Peace

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

# Chain-of-Custody Record

Client: Blagg Engineering Inc. of America

Mailing Address: PO Box 87 Bloomfield NM 87413

Phone #: 505-632-1199

email or Fax#:

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

Accreditation ☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: By Thursday 3/14/2013

☐ Standard ☒ Rush

Project Name: ULIBARRI GC 2

Project #:

Project Manager: J. Blagg

Sampler: J. Blagg

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.5


HALL ENVIRONMENTAL ANALYSIS LABORATORY

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4901 Hawkins NE - Albuquerque, NM 87109

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


| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions (F,Cl,$NO_3$,$NO_2$,$PO_4$,$SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/8/13 | 1140 | SOIL | 146' S83½W @ 10'-12' | 4oz x1 | MeOH | 1303448 -001 | X | | X | | | | | | | | | X | | | | |

Analysis Request

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 3/8/13 | 1305 | Jeff Blagg | Christa Waller | 3/8/13 | 1305 |
| 3/11/13 | 1730 | Christa Waller | | 03/12/13 | 0953 |

Remarks: BILL BLAGG

BP contact: Jeff Peace

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

# Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

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

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush
COMPLETE BY 03/20/2013

Project Name: ULIBARRI GC # 2

Project #:

Project Manager: JEFF BLAGG

Sampler: NELSON VELEZ NV

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107


Analysis Request

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1303682 | BTEX + ~~MTBE + TMB's~~ (8021B) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / ~~MRO~~) NV | TPH (Method 418.1) | EDB (Method 504.1) | PAH (8310 or 8270SIMS) | RCRA 8 Metals | Anions ($F,Cl,NO_3,NO_2,PO_4,SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | Chloride (soil - 300.0 / water - 300.1) | | Grab sample | 5 pt. composite sample | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/11/13 | 1320 | SOIL | 180', S73W @11'-13' | 4 oz. - 1 | Cool | -001 | ✓ | | ✓ | | | | | | | | | ✓ | | ✓ | | |
| 3/11/13 | 1335 | SOIL | 171', S88W @11'-13' | 4 oz. - 1 | Cool | -002 | ✓ | | ✓ | | | | | | | | | ✓ | | ✓ | | |

| Date | Time | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 3/13/13 | 843 | | Christie Walters | 3/13/13 | 843 |
| 3/13/13 | 1748 | Christie Walters | | 03/14/13 | 10:00 |

Remarks: **BP Contact: Jeff Peace**

**Send invoice to :**
**Blagg Engineering, Inc.**
**P.O. Box 87**
**Bloomfield, NM 87413**

# Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

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

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name:
ULIBARRI GC # 1A / # 2

Project #:

Project Manager:
JEFF BLAGG

Sampler: NELSON VELEZ NV

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.6


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107


Analysis Request

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1305226 | BTEX + ~~MTBE + TMB's~~ (8021B) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / ~~MRO~~) | TPH (Method 418.1) | EDB (Method 504.1) | PAH (8310 or 8270SIMS) | RCRA 8 Metals NV | Anions (F,Cl,~~NO3,NO2,PO4,~~SO4) | Total Dissolved Solids | Iron, Ferrous (filtered) | Nitrate N / Nitrite N | | | Grab sample | 5 pt. composite sample |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4/29/13 | 1100 | WATER | MW # 1 | 40 ml VOA - 2 | HCl & Cool | -001 | √ | | | | | | | | | | | | | √ | |
| 4/29/13 | 1100 | WATER | MW # 1 | 500 ml - 1 | Cool | | | | | | | | | √ | √ | | | | | √ | |
| 4/29/13 | 1100 | WATER | MW # 1 | 250 ml - 1 | $HNO_3$ & Cool | | | | | | | | | | | √ | | | | √ | |
| 4/29/13 | 1100 | WATER | MW # 1 | 250 ml - 1 | $H_2SO_4$ | | | | | | | | | | | | √ | | | √ | |
| ~~4/29/13~~ | ~~1510~~ | ~~WATER~~ | ~~MW # 2~~ | ~~40 ml VOA - 2~~ | ~~HCl & Cool~~ | -002 | √ | | | | | | | | | | | | | √ | |
| ~~4/29/13~~ | ~~1510~~ | ~~WATER~~ | ~~MW # 2~~ | ~~500 ml - 1~~ | ~~Cool~~ | | | | | | | | | √ | √ | | | | | √ | |
| ~~4/29/13~~ | ~~1510~~ | ~~WATER~~ | ~~MW # 2~~ | ~~250 ml - 1~~ | ~~$HNO_3$ & Cool~~ | | | | | | | | | | | √ | | | | √ | |
| ~~4/29/13~~ | ~~1510~~ | ~~WATER~~ | ~~MW # 2~~ | ~~250 ml - 1~~ | ~~$H_2SO_4$~~ | | | | | | | | | | | | √ | | | √ | |
| ~~4/29/13~~ | ~~1320~~ | ~~WATER~~ | ~~MW # 3~~ | ~~40 ml VOA - 2~~ | ~~HCl & Cool~~ | -003 | √ | | | | | | | | | | | | | √ | |
| ~~4/29/13~~ | ~~1320~~ | ~~WATER~~ | ~~MW # 3~~ | ~~500 ml - 1~~ | ~~Cool~~ | | | | | | | | | √ | √ | | | | | √ | |
| ~~4/29/13~~ | ~~1320~~ | ~~WATER~~ | ~~MW # 3~~ | ~~250 ml - 1~~ | ~~$HNO_3$ & Cool~~ | | | | | | | | | | | √ | | | | √ | |
| ~~4/29/13~~ | ~~1320~~ | ~~WATER~~ | ~~MW # 3~~ | ~~250 ml - 1~~ | ~~$H_2SO_4$~~ | | | | | | | | | | | | √ | | | √ | |

| Date | Time | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 4/30/13 | 816 | | Christine Walters | 4/30/13 | 816 |
| 4/30/13 | 1740 | Christine Walters | | 05/01/13 | 0950 |

Remarks: **BP Contact: Jeff Peace**

**Send invoice to :**
**Blagg Engineering, Inc.**
**P.O. Box 87**
**Bloomfield, NM 87413**

# Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

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

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: ULIBARRI GC # 1A / # 2

Project #:

Project Manager: JEFF BLAGG

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.6

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1305026 | BTEX + ~~MTBE + TMB's~~ (8021B) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / ~~MRO~~) | TPH (Method 418.1) | EDB (Method 504.1) | PAH (8310 or 8270SIMS) | RCRA 8 Metals | Anions (F,Cl,~~NO3~~,~~NO2~~,~~PO4~~,SO4) | Total Dissolved Solids | Iron, Ferrous (filtered) | Nitrate N / Nitrite N | | | Grab sample | 5 pt. composite sample | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4/29/13 | 1410 | WATER | MW # 4 | 40 ml VOA - 2 | HCl & Cool | -004 | ✓ | | | | | | | | | | | | | ✓ | | |
| 4/29/13 | 1410 | WATER | MW # 4 | 500 ml - 1 | Cool | | | | | | | | | ✓ | ✓ | | | | | ✓ | | |
| 4/29/13 | 1410 | WATER | MW # 4 | 250 ml - 1 | $HNO_3$ & Cool | | | | | | | | | | | ✓ | | | | ✓ | | |
| 4/29/13 | 1410 | WATER | MW # 4 | 250 ml - 1 | $H_2SO_4$ | | | | | | | | | | | | ✓ | | | ✓ | | |
| 4/29/13 | 1235 | WATER | MW # 5 | 40 ml VOA - 2 | HCl & Cool | -005 | ✓ | | | | | | | | | | | | | ✓ | | |
| 4/29/13 | 1235 | WATER | MW # 5 | 500 ml - 1 | Cool | | | | | | | | | ✓ | ✓ | | | | | ✓ | | |
| 4/29/13 | 1235 | WATER | MW # 5 | 250 ml - 1 | $HNO_3$ & Cool | | | | | | | | | | | ✓ | | | | ✓ | | |
| 4/29/13 | 1235 | WATER | MW # 5 | 250 ml - 1 | $H_2SO_4$ | | | | | | | | | | | | ✓ | | | ✓ | | |
| 4/29/13 | 1155 | WATER | MW # 6 | 40 ml VOA - 2 | HCl & Cool | -006 | ✓ | | | | | | | | | | | | | ✓ | | |
| 4/29/13 | 1155 | WATER | MW # 6 | 500 ml - 1 | Cool | | | | | | | | | ✓ | ✓ | | | | | ✓ | | |
| 4/29/13 | 1155 | WATER | MW # 6 | 250 ml - 1 | $HNO_3$ & Cool | | | | | | | | | | | ✓ | | | | ✓ | | |
| 4/29/13 | 1155 | WATER | MW # 6 | 250 ml - 1 | $H_2SO_4$ | | | | | | | | | | | | ✓ | | | ✓ | | |

| Date | Time | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 4/30/13 | 816 | | Christine Walters | 4/30/13 | 816 |
| 1/30/13 | 1740 | Christine Walters | | 05/01/13 | 0960 |

Remarks: **BP Contact: Jeff Peace**

**Send invoice to :**
Blagg Engineering, Inc.
P.O. Box 87
Bloomfield, NM 87413

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1206B93**

*11-Jul-12*

**Client:** Blagg Engineering

**Project:** Ulibarri GC 2

| Sample ID | **MB-2673** | SampType: | **MBLK** | | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **2673** | | | RunNo: | **3837** | | | | |
| Prep Date: | **7/2/2012** | Analysis Date: | **7/2/2012** | | | SeqNo: | **108769** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Chloride | ND | 1.5 | | | | | | | | | |

| Sample ID | **LCS-2673** | SampType: | **LCS** | | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: | **2673** | | | RunNo: | **3837** | | | | |
| Prep Date: | **7/2/2012** | Analysis Date: | **7/2/2012** | | | SeqNo: | **108770** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Chloride | 14 | 1.5 | 15.00 | 0 | 96.0 | 90 | 110 | | | | |

| Sample ID | **MB-2690** | SampType: | **MBLK** | | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **2690** | | | RunNo: | **3861** | | | | |
| Prep Date: | **7/3/2012** | Analysis Date: | **7/3/2012** | | | SeqNo: | **109558** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Chloride | ND | 1.5 | | | | | | | | | |

| Sample ID | **LCS-2690** | SampType: | **LCS** | | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: | **2690** | | | RunNo: | **3861** | | | | |
| Prep Date: | **7/3/2012** | Analysis Date: | **7/3/2012** | | | SeqNo: | **109561** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Chloride | 14 | 1.5 | 15.00 | 0 | 92.6 | 90 | 110 | | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1206B93**

*11-Jul-12*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **MB-2635** | SampType: **MBLK** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **2635** | RunNo: **3783** |
| Prep Date: **6/29/2012** | Analysis Date: **6/30/2012** | SeqNo: **107009** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 10 | | 10.00 | | 103 | 77.6 | 140 | | | |

| Sample ID **LCS-2635** | SampType: **LCS** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **2635** | RunNo: **3783** |
| Prep Date: **6/29/2012** | Analysis Date: **6/30/2012** | SeqNo: **107011** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 40 | 10 | 50.00 | 0 | 80.4 | 52.6 | 130 | | | |
| Surr: DNOP | 4.0 | | 5.000 | | 80.9 | 77.6 | 140 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1206B93**

*11-Jul-12*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **mb-2616** | SampType: **MBLK** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **2616** | RunNo: **3777** |
| Prep Date: **6/28/2012** | Analysis Date: **6/29/2012** | SeqNo: **108137** 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 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.40 | | 0.5000 | | 80.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.45 | | 0.5000 | | 91.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.39 | | 0.5000 | | 77.4 | 71.7 | 132 | | | |
| Surr: Toluene-d8 | 0.43 | | 0.5000 | | 85.1 | 70 | 130 | | | |

| Sample ID **lcs-2616** | SampType: **LCS** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **2616** | RunNo: **3777** |
| Prep Date: **6/28/2012** | Analysis Date: **6/29/2012** | SeqNo: **108138** 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 | 102 | 70.7 | 123 | | | |
| Toluene | 0.96 | 0.050 | 1.000 | 0 | 96.2 | 80 | 120 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.40 | | 0.5000 | | 81.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.47 | | 0.5000 | | 94.3 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.42 | | 0.5000 | | 84.7 | 71.7 | 132 | | | |
| Surr: Toluene-d8 | 0.44 | | 0.5000 | | 87.2 | 70 | 130 | | | |

| Sample ID **mb-2629** | SampType: **MBLK** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **2629** | RunNo: **3860** |
| Prep Date: **6/28/2012** | Analysis Date: **7/3/2012** | SeqNo: **109692** 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 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.41 | | 0.5000 | | 82.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.45 | | 0.5000 | | 90.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.42 | | 0.5000 | | 84.1 | 71.7 | 132 | | | |
| Surr: Toluene-d8 | 0.43 | | 0.5000 | | 86.3 | 70 | 130 | | | |

| Sample ID **lcs-2629** | SampType: **LCS** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **2629** | RunNo: **3860** |
| Prep Date: **6/28/2012** | Analysis Date: **7/3/2012** | SeqNo: **109717** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.98 | 0.050 | 1.000 | 0 | 97.8 | 70.7 | 123 | | | |
| Toluene | 0.93 | 0.050 | 1.000 | 0 | 93.3 | 80 | 120 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1206B93**

*11-Jul-12*

**Client:** Blagg Engineering

**Project:** Ulibarri GC 2

| Sample ID **lcs-2629** | SampType: **LCS** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **2629** | RunNo: **3860** |
| Prep Date: **6/28/2012** | Analysis Date: **7/3/2012** | SeqNo: **109717** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 1,2-Dichloroethane-d4 | 0.42 | | 0.5000 | | 83.2 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.44 | | 0.5000 | | 88.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.40 | | 0.5000 | | 80.1 | 71.7 | 132 | | | |
| Surr: Toluene-d8 | 0.43 | | 0.5000 | | 85.4 | 70 | 130 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1206B93**

*11-Jul-12*

**Client:** Blagg Engineering

**Project:** Ulibarri GC 2

| Sample ID **mb-2616** | SampType: **MBLK** | | | TestCode: **EPA Method 8015B Mod: Gasoline Range** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **2616** | | | RunNo: **3777** | | | | | |
| Prep Date: **6/28/2012** | Analysis Date: **6/29/2012** | | | SeqNo: **107743** | | 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 | 450 | | 500.0 | | 91.0 | 70 | 130 | | | |

| Sample ID **LCS-2616** | SampType: **LCS** | | | TestCode: **EPA Method 8015B Mod: Gasoline Range** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **2616** | | | RunNo: **3777** | | | | | |
| Prep Date: **6/28/2012** | Analysis Date: **6/29/2012** | | | SeqNo: **107744** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 31 | 5.0 | 25.00 | 0 | 123 | 85 | 115 | | | S |
| Surr: BFB | 450 | | 500.0 | | 89.2 | 70 | 130 | | | |

| Sample ID **mb-2629** | SampType: **MBLK** | | | TestCode: **EPA Method 8015B Mod: Gasoline Range** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **2629** | | | RunNo: **3860** | | | | | |
| Prep Date: **6/28/2012** | Analysis Date: **7/3/2012** | | | SeqNo: **109463** | | 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 | 450 | | 500.0 | | 90.2 | 70 | 130 | | | |

| Sample ID **LCS-2629** | SampType: **LCS** | | | TestCode: **EPA Method 8015B Mod: Gasoline Range** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **2629** | | | RunNo: **3860** | | | | | |
| Prep Date: **6/28/2012** | Analysis Date: **7/3/2012** | | | SeqNo: **109466** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 32 | 5.0 | 25.00 | 0 | 129 | 85 | 115 | | | S |
| Surr: BFB | 430 | | 500.0 | | 85.9 | 70 | 130 | | | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: BLAGG Work Order Number: 1206B93

Received by/date: AG 06/28/12

Logged By: Anne Thorne 6/28/2012 10:00:00 AM

Completed By: Anne Thorne 6/28/2012

Reviewed By: MG 06/28/12

## Chain of Custody

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

## Log In

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

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

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. **Cooler Information**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1301716**

*25-Jan-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID | **MB-5796** | SampType: | **MBLK** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **5796** | | RunNo: | **8232** | | | | |
| Prep Date: | **1/23/2013** | Analysis Date: | **1/23/2013** | | SeqNo: | **237878** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | **LCS-5796** | SampType: | **LCS** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: | **5796** | | RunNo: | **8232** | | | | |
| Prep Date: | **1/23/2013** | Analysis Date: | **1/23/2013** | | SeqNo: | **237880** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 96.4 | 90 | 110 | | | |

| Sample ID | **1301617-001AMS** | SampType: | **MS** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BatchQC** | Batch ID: | **5796** | | RunNo: | **8232** | | | | |
| Prep Date: | **1/23/2013** | Analysis Date: | **1/23/2013** | | SeqNo: | **237906** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 35 | 7.5 | 15.00 | 19.72 | 99.9 | 64.4 | 117 | | | |

| Sample ID | **1301617-001AMSD** | SampType: | **MSD** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BatchQC** | Batch ID: | **5796** | | RunNo: | **8232** | | | | |
| Prep Date: | **1/23/2013** | Analysis Date: | **1/23/2013** | | SeqNo: | **237907** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 34 | 7.5 | 15.00 | 19.72 | 92.2 | 64.4 | 117 | 3.42 | 20 | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1301716**

*25-Jan-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

Sample ID **MB-5800** SampType: **MBLK** TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **PBS** Batch ID: **5800** RunNo: **8204**
Prep Date: **1/23/2013** Analysis Date: **1/23/2013** SeqNo: **237348** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 10 | | 10.00 | | 103 | 72.4 | 120 | | | |

Sample ID **LCS-5800** SampType: **LCS** TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **5800** RunNo: **8204**
Prep Date: **1/23/2013** Analysis Date: **1/23/2013** SeqNo: **237349** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 49 | 10 | 50.00 | 0 | 97.7 | 47.4 | 122 | | | |
| Surr: DNOP | 5.5 | | 5.000 | | 109 | 72.4 | 120 | | | |

Sample ID **MB-5753** SampType: **MBLK** TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **PBS** Batch ID: **5753** RunNo: **8204**
Prep Date: **1/21/2013** Analysis Date: **1/23/2013** SeqNo: **237449** Units: **%REC**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 9.8 | | 10.00 | | 98.4 | 72.4 | 120 | | | |

Sample ID **LCS-5753** SampType: **LCS** TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **5753** RunNo: **8204**
Prep Date: **1/21/2013** Analysis Date: **1/23/2013** SeqNo: **237450** Units: **%REC**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 5.3 | | 5.000 | | 106 | 72.4 | 120 | | | |

Sample ID **1301604-001AMS** SampType: **MS** TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC** Batch ID: **5753** RunNo: **8204**
Prep Date: **1/21/2013** Analysis Date: **1/23/2013** SeqNo: **237666** Units: **%REC**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 5.3 | | 4.995 | | 107 | 72.4 | 120 | | | |

Sample ID **1301604-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC** Batch ID: **5753** RunNo: **8204**
Prep Date: **1/21/2013** Analysis Date: **1/23/2013** SeqNo: **237668** Units: **%REC**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 5.6 | | 5.107 | | 109 | 72.4 | 120 | 0 | 0 | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1301716**

*25-Jan-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID | **MB-5814** | SampType: | **MBLK** | | TestCode: | **EPA Method 8015B: Diesel Range Organics** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **5814** | | RunNo: | **8204** | | | | |
| Prep Date: | **1/24/2013** | Analysis Date: | **1/24/2013** | | SeqNo: | **238133** | Units: | **%REC** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 9.8 | | 10.00 | | 97.7 | 72.4 | 120 | | | |

| Sample ID | **LCS-5814** | SampType: | **LCS** | | TestCode: | **EPA Method 8015B: Diesel Range Organics** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: | **5814** | | RunNo: | **8204** | | | | |
| Prep Date: | **1/24/2013** | Analysis Date: | **1/24/2013** | | SeqNo: | **238134** | Units: | **%REC** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 5.4 | | 5.000 | | 109 | 72.4 | 120 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1301716**

*25-Jan-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID | **MB-5773** | SampType: | **MBLK** | | TestCode: | **EPA Method 8015B: Gasoline Range** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **5773** | | RunNo: | **8209** | | | | |
| Prep Date: | **1/22/2013** | Analysis Date: | **1/23/2013** | | SeqNo: | **237670** | Units: | **%REC** | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: BFB | 1000 | | 1000 | | 104 | 84 | 116 | | | |

| Sample ID | **LCS-5773** | SampType: | **LCS** | | TestCode: | **EPA Method 8015B: Gasoline Range** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: | **5773** | | RunNo: | **8209** | | | | |
| Prep Date: | **1/22/2013** | Analysis Date: | **1/23/2013** | | SeqNo: | **237671** | Units: | **%REC** | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: BFB | 1300 | | 1000 | | 127 | 84 | 116 | | | S |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1301716**

*25-Jan-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **MB-5773** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **5773** | RunNo: **8209** |
| Prep Date: **1/22/2013** | Analysis Date: **1/23/2013** | SeqNo: **237699** Units: **%REC** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 1.2 | | 1.000 | | 116 | 80 | 120 | | | |

| Sample ID **LCS-5773** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **5773** | RunNo: **8209** |
| Prep Date: **1/22/2013** | Analysis Date: **1/23/2013** | SeqNo: **237700** Units: **%REC** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 1.2 | | 1.000 | | 118 | 80 | 120 | | | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*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: BLAGG Work Order Number: 1301716

Received by/date: AG 01/23/13

Logged By: Michelle Garcia 1/23/2013 10:05:00 AM Michelle Garcia

Completed By: Michelle Garcia 1/23/2013 10:10:11 AM Michelle Garcia

Reviewed By: 01/23/13

## Chain of Custody

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

## Log In

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

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

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. **Cooler Information**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1301836**

*28-Jan-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **5ML RB** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R8291** | RunNo: **8291** |
| Prep Date: | Analysis Date: **1/25/2013** | SeqNo: **239490** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 19 | | 20.00 | | 93.9 | 69.7 | 152 | | | |

| Sample ID **100NG BTEX LCS** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R8291** | RunNo: **8291** |
| Prep Date: | Analysis Date: **1/25/2013** | SeqNo: **239491** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 20 | 1.0 | 20.00 | 0 | 97.5 | 80 | 120 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 97.6 | 80 | 120 | | | |
| Ethylbenzene | 20 | 1.0 | 20.00 | 0 | 99.7 | 80 | 120 | | | |
| Xylenes, Total | 62 | 2.0 | 60.00 | 0 | 103 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 20 | | 20.00 | | 102 | 69.7 | 152 | | | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: BLAGG Work Order Number: 1301836

Received by/date: 01/25/13

Logged By: Michelle Garcia 1/25/2013 10:00:00 AM Michelle Garcia

Completed By: Michelle Garcia 1/25/2013 10:03:36 AM Michelle Garcia

Reviewed By: 01/25/13

## Chain of Custody

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

## Log In

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

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

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. **Cooler Information**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302592**

*21-Feb-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID | **MB-6148** | SampType: **MBLK** | | | TestCode: **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: **6148** | | | RunNo: **8724** | | | | | |
| Prep Date: | **2/18/2013** | Analysis Date: **2/19/2013** | | | SeqNo: **250053** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | **LCS-6148** | SampType: **LCS** | | | TestCode: **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: **6148** | | | RunNo: **8724** | | | | | |
| Prep Date: | **2/18/2013** | Analysis Date: **2/19/2013** | | | SeqNo: **250054** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 94.5 | 90 | 110 | | | |

| Sample ID | **1302550-001AMS** | SampType: **MS** | | | TestCode: **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BatchQC** | Batch ID: **6148** | | | RunNo: **8724** | | | | | |
| Prep Date: | **2/18/2013** | Analysis Date: **2/19/2013** | | | SeqNo: **250056** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 40 | 7.5 | 15.00 | 30.28 | 65.1 | 64.4 | 117 | | | |

| Sample ID | **1302550-001AMSD** | SampType: **MSD** | | | TestCode: **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BatchQC** | Batch ID: **6148** | | | RunNo: **8724** | | | | | |
| Prep Date: | **2/18/2013** | Analysis Date: **2/19/2013** | | | SeqNo: **250057** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 43 | 7.5 | 15.00 | 30.28 | 85.7 | 64.4 | 117 | 7.41 | 20 | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302592**

*21-Feb-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

Sample ID **1302534-001AMS** SampType: **MS** TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC** Batch ID: **6146** RunNo: **8719**
Prep Date: **2/18/2013** Analysis Date: **2/19/2013** SeqNo: **250035** Units: **%REC**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 7.2 | | 4.826 | | 149 | 72.4 | 120 | | | S |

Sample ID **1302534-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC** Batch ID: **6146** RunNo: **8719**
Prep Date: **2/18/2013** Analysis Date: **2/19/2013** SeqNo: **250036** Units: **%REC**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 7.0 | | 4.960 | | 141 | 72.4 | 120 | 0 | 0 | S |

Sample ID **MB-6161** SampType: **MBLK** TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **PBS** Batch ID: **6161** RunNo: **8719**
Prep Date: **2/19/2013** Analysis Date: **2/19/2013** SeqNo: **250074** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 10 | | 10.00 | | 102 | 72.4 | 120 | | | |

Sample ID **LCS-6161** SampType: **LCS** TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **6161** RunNo: **8719**
Prep Date: **2/19/2013** Analysis Date: **2/19/2013** SeqNo: **250075** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 52 | 10 | 50.00 | 0 | 104 | 47.4 | 122 | | | |
| Surr: DNOP | 5.3 | | 5.000 | | 106 | 72.4 | 120 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302592**

*21-Feb-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID | MB-6147 | SampType: | MBLK | | TestCode: | EPA Method 8015B: Gasoline Range | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBS | Batch ID: | R8742 | | RunNo: | 8742 | | | | |
| Prep Date: | 2/18/2013 | Analysis Date: | 2/19/2013 | | SeqNo: | 250395 | 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 | 1100 | | 1000 | | 105 | 84 | 116 | | | |

| Sample ID | LCS-6147 | SampType: | LCS | | TestCode: | EPA Method 8015B: Gasoline Range | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSS | Batch ID: | R8742 | | RunNo: | 8742 | | | | |
| Prep Date: | 2/18/2013 | Analysis Date: | 2/19/2013 | | SeqNo: | 250396 | 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 | 110 | 62.6 | 136 | | | |
| Surr: BFB | 1100 | | 1000 | | 113 | 84 | 116 | | | |

| Sample ID | MB-6147 | SampType: | MBLK | | TestCode: | EPA Method 8015B: Gasoline Range | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBS | Batch ID: | 6147 | | RunNo: | 8742 | | | | |
| Prep Date: | 2/18/2013 | Analysis Date: | 2/19/2013 | | SeqNo: | 250399 | Units: | %REC | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 1100 | | 1000 | | 105 | 84 | 116 | | | |

| Sample ID | LCS-6147 | SampType: | LCS | | TestCode: | EPA Method 8015B: Gasoline Range | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSS | Batch ID: | 6147 | | RunNo: | 8742 | | | | |
| Prep Date: | 2/18/2013 | Analysis Date: | 2/19/2013 | | SeqNo: | 250400 | Units: | %REC | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 1100 | | 1000 | | 113 | 84 | 116 | | | |

| Sample ID | 1302530-001AMS | SampType: | MS | | TestCode: | EPA Method 8015B: Gasoline Range | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | BatchQC | Batch ID: | 6147 | | RunNo: | 8742 | | | | |
| Prep Date: | 2/18/2013 | Analysis Date: | 2/19/2013 | | SeqNo: | 250403 | Units: | %REC | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 1100 | | 950.6 | | 112 | 84 | 116 | | | |

| Sample ID | 1302530-001AMSD | SampType: | MSD | | TestCode: | EPA Method 8015B: Gasoline Range | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | BatchQC | Batch ID: | 6147 | | RunNo: | 8742 | | | | |
| Prep Date: | 2/18/2013 | Analysis Date: | 2/19/2013 | | SeqNo: | 250404 | Units: | %REC | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 1100 | | 947.0 | | 113 | 84 | 116 | 0 | 0 | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302592**

*21-Feb-13*

**Client:** Blagg Engineering

**Project:** Ulibarri GC 2

| Sample ID | **MB-6147** | SampType: **MBLK** | | | TestCode: **EPA Method 8021B: Volatiles** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: **R8742** | | | RunNo: **8742** | | | | | |
| Prep Date: | **2/18/2013** | Analysis Date: **2/19/2013** | | | SeqNo: **250467** | | 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 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 107 | 80 | 120 | | | |

| Sample ID | **LCS-6147** | SampType: **LCS** | | | TestCode: **EPA Method 8021B: Volatiles** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: **R8742** | | | RunNo: **8742** | | | | | |
| Prep Date: | **2/18/2013** | Analysis Date: **2/19/2013** | | | SeqNo: **250468** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.94 | 0.050 | 1.000 | 0 | 93.8 | 80 | 120 | | | |
| Toluene | 0.92 | 0.050 | 1.000 | 0 | 91.9 | 80 | 120 | | | |
| Ethylbenzene | 0.92 | 0.050 | 1.000 | 0 | 92.3 | 80 | 120 | | | |
| Xylenes, Total | 2.9 | 0.10 | 3.000 | 0 | 95.1 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 114 | 80 | 120 | | | |

| Sample ID | **MB-6147** | SampType: **MBLK** | | | TestCode: **EPA Method 8021B: Volatiles** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: **6147** | | | RunNo: **8742** | | | | | |
| Prep Date: | **2/18/2013** | Analysis Date: **2/19/2013** | | | SeqNo: **250472** | | Units: **%REC** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 107 | 80 | 120 | | | |

| Sample ID | **LCS-6147** | SampType: **LCS** | | | TestCode: **EPA Method 8021B: Volatiles** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: **6147** | | | RunNo: **8742** | | | | | |
| Prep Date: | **2/18/2013** | Analysis Date: **2/19/2013** | | | SeqNo: **250473** | | Units: **%REC** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 114 | 80 | 120 | | | |

| Sample ID | **1302529-001AMS** | SampType: **MS** | | | TestCode: **EPA Method 8021B: Volatiles** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BatchQC** | Batch ID: **6147** | | | RunNo: **8742** | | | | | |
| Prep Date: | **2/18/2013** | Analysis Date: **2/19/2013** | | | SeqNo: **250475** | | Units: **%REC** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 1.0 | | 0.9524 | | 109 | 80 | 120 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302592**

*21-Feb-13*

**Client:** Blagg Engineering

**Project:** Ulibarri GC 2

Sample ID **1302529-001AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BatchQC** Batch ID: **6147** RunNo: **8742**

Prep Date: **2/18/2013** Analysis Date: **2/19/2013** SeqNo: **250476** Units: **%REC**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 1.1 | | 0.9960 | | 111 | 80 | 120 | 0 | 0 | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: BLAGG Work Order Number: 1302592

Received by/date: LM 02/19/13

Logged By: **Michelle Garcia** 2/19/2013 9:50:00 AM Michelle Garcia

Completed By: **Michelle Garcia** 2/19/2013 10:08:42 AM Michelle Garcia

Reviewed By: SR 2/19/13

## Chain of Custody

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

## Log In

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

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

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. **Cooler Information**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.3 | Good | Yes | | | |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302718**

*25-Feb-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID | **MB-6203** | SampType: | **MBLK** | | | TestCode: | **EPA Method 300.0: Anions** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **6203** | | | RunNo: | **8786** | | | |
| Prep Date: | **2/21/2013** | Analysis Date: | **2/21/2013** | | | SeqNo: | **251595** | Units: | **mg/Kg** | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | **1302717-001AMS** | SampType: | **MS** | | | TestCode: | **EPA Method 300.0: Anions** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BatchQC** | Batch ID: | **6203** | | | RunNo: | **8786** | | | |
| Prep Date: | **2/21/2013** | Analysis Date: | **2/21/2013** | | | SeqNo: | **251598** | Units: | **mg/Kg** | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 240 | 30 | 15.00 | 233.0 | 54.6 | 64.4 | 117 | | | S |

| Sample ID | **1302717-001AMSD** | SampType: | **MSD** | | | TestCode: | **EPA Method 300.0: Anions** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BatchQC** | Batch ID: | **6203** | | | RunNo: | **8786** | | | |
| Prep Date: | **2/21/2013** | Analysis Date: | **2/21/2013** | | | SeqNo: | **251599** | Units: | **mg/Kg** | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 270 | 30 | 15.00 | 233.0 | 221 | 64.4 | 117 | 9.86 | 20 | 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 |
| P | Sample pH greater than 2 | R | RPD outside accepted recovery limits |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302718**

*25-Feb-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **MB-6218** | SampType: **MBLK** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6218** | RunNo: **8825** |
| Prep Date: **2/22/2013** | Analysis Date: **2/25/2013** | SeqNo: **252344** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 8.7 | | 10.00 | | 87.4 | 72.4 | 120 | | | |

| Sample ID **LCS-6218** | SampType: **LCS** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6218** | RunNo: **8825** |
| Prep Date: **2/22/2013** | Analysis Date: **2/25/2013** | SeqNo: **252345** 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 | 103 | 47.4 | 122 | | | |
| Surr: DNOP | 5.2 | | 5.000 | | 104 | 72.4 | 120 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302718**

*25-Feb-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

Sample ID **MB-6202** SampType: **MBLK** TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **PBS** Batch ID: **6202** RunNo: **8789**
Prep Date: **2/21/2013** Analysis Date: **2/22/2013** SeqNo: **252146** 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 | 1000 | | 1000 | | 103 | 84 | 116 | | | |

Sample ID **LCS-6202** SampType: **LCS** TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **LCSS** Batch ID: **6202** RunNo: **8789**
Prep Date: **2/21/2013** Analysis Date: **2/22/2013** SeqNo: **252147** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 29 | 5.0 | 25.00 | 0 | 115 | 62.6 | 136 | | | |
| Surr: BFB | 1100 | | 1000 | | 113 | 84 | 116 | | | |

Sample ID **1302718-001AMS** SampType: **MS** TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **67' S33W@11'-13'** Batch ID: **6202** RunNo: **8789**
Prep Date: **2/21/2013** Analysis Date: **2/22/2013** SeqNo: **252149** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 28 | 4.8 | 24.06 | 0 | 115 | 70 | 130 | | | |
| Surr: BFB | 1200 | | 962.5 | | 122 | 84 | 116 | | | S |

Sample ID **1302718-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **67' S33W@11'-13'** Batch ID: **6202** RunNo: **8789**
Prep Date: **2/21/2013** Analysis Date: **2/22/2013** SeqNo: **252150** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 29 | 4.7 | 23.34 | 0 | 124 | 70 | 130 | 3.97 | 22.1 | |
| Surr: BFB | 1100 | | 933.7 | | 119 | 84 | 116 | 0 | 0 | S |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302718**

*25-Feb-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **MB-6202** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6202** | RunNo: **8789** |
| Prep Date: **2/21/2013** | Analysis Date: **2/22/2013** | SeqNo: **252157** 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 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 105 | 80 | 120 | | | |

| Sample ID **LCS-6202** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6202** | RunNo: **8789** |
| Prep Date: **2/21/2013** | Analysis Date: **2/22/2013** | SeqNo: **252158** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.96 | 0.050 | 1.000 | 0 | 96.3 | 80 | 120 | | | |
| Toluene | 0.95 | 0.050 | 1.000 | 0 | 95.3 | 80 | 120 | | | |
| Ethylbenzene | 0.94 | 0.050 | 1.000 | 0 | 94.1 | 80 | 120 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 93.9 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 108 | 80 | 120 | | | |

| Sample ID **1302719-001AMS** | SampType: **MS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **BatchQC** | Batch ID: **6202** | RunNo: **8789** |
| Prep Date: **2/21/2013** | Analysis Date: **2/22/2013** | SeqNo: **252162** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 1.0 | 0.049 | 0.9843 | 0 | 105 | 67.2 | 113 | | | |
| Toluene | 1.0 | 0.049 | 0.9843 | 0 | 105 | 62.1 | 116 | | | |
| Ethylbenzene | 1.0 | 0.049 | 0.9843 | 0 | 106 | 67.9 | 127 | | | |
| Xylenes, Total | 3.1 | 0.098 | 2.953 | 0 | 107 | 60.6 | 134 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 0.9843 | | 109 | 80 | 120 | | | |

| Sample ID **1302719-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **BatchQC** | Batch ID: **6202** | RunNo: **8789** |
| Prep Date: **2/21/2013** | Analysis Date: **2/22/2013** | SeqNo: **252163** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.89 | 0.048 | 0.9662 | 0 | 92.3 | 67.2 | 113 | 14.5 | 14.3 | R |
| Toluene | 0.88 | 0.048 | 0.9662 | 0 | 90.6 | 62.1 | 116 | 16.7 | 15.9 | R |
| Ethylbenzene | 0.91 | 0.048 | 0.9662 | 0 | 94.1 | 67.9 | 127 | 14.2 | 14.4 | |
| Xylenes, Total | 2.8 | 0.097 | 2.899 | 0 | 95.4 | 60.6 | 134 | 13.0 | 12.6 | R |
| Surr: 4-Bromofluorobenzene | 1.0 | | 0.9662 | | 106 | 80 | 120 | 0 | 0 | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: BLAGG Work Order Number: 1302718

Received by/date: MG 02/21/13

Logged By: Michelle Garcia 2/21/2013 10:15:00 AM Michelle Garcia

Completed By: Michelle Garcia 2/21/2013 10:31:11 AM Michelle Garcia

Reviewed By: 02/21/13

## Chain of Custody

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

## Log In

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

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

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. Cooler Information

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302919**

*04-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID | **MB-6291** | SampType: | **MBLK** | | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **6291** | | | RunNo: | **8926** | | | | |
| Prep Date: | **3/1/2013** | Analysis Date: | **3/1/2013** | | | SeqNo: | **254932** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Chloride | ND | 1.5 | | | | | | | | | |

| Sample ID | **LCS-6291** | SampType: | **LCS** | | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: | **6291** | | | RunNo: | **8926** | | | | |
| Prep Date: | **3/1/2013** | Analysis Date: | **3/1/2013** | | | SeqNo: | **254933** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Chloride | 15 | 1.5 | 15.00 | 0 | 99.1 | 90 | 110 | | | | |

| Sample ID | **1302929-001AMS** | SampType: | **MS** | | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BatchQC** | Batch ID: | **6291** | | | RunNo: | **8926** | | | | |
| Prep Date: | **3/1/2013** | Analysis Date: | **3/1/2013** | | | SeqNo: | **254949** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Chloride | 20 | 1.5 | 15.00 | 6.050 | 90.2 | 64.4 | 117 | | | | |

| Sample ID | **1302929-001AMSD** | SampType: | **MSD** | | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BatchQC** | Batch ID: | **6291** | | | RunNo: | **8926** | | | | |
| Prep Date: | **3/1/2013** | Analysis Date: | **3/1/2013** | | | SeqNo: | **254950** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Chloride | 20 | 1.5 | 15.00 | 6.050 | 90.7 | 64.4 | 117 | 0.349 | 20 | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302919**

***04-Mar-13***

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **MB-6278** | SampType: **MBLK** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6278** | RunNo: **8891** |
| Prep Date: **2/28/2013** | Analysis Date: **2/28/2013** | SeqNo: **254152** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 11 | | 10.00 | | 106 | 72.4 | 120 | | | |

| Sample ID **LCS-6278** | SampType: **LCS** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6278** | RunNo: **8891** |
| Prep Date: **2/28/2013** | Analysis Date: **2/28/2013** | SeqNo: **254153** 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 | 102 | 47.4 | 122 | | | |
| Surr: DNOP | 5.6 | | 5.000 | | 112 | 72.4 | 120 | | | |

| Sample ID **1302919-001AMS** | SampType: **MS** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **103'+115' S32W @ 1** | Batch ID: **6278** | RunNo: **8907** |
| Prep Date: **2/28/2013** | Analysis Date: **3/1/2013** | SeqNo: **254671** 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 | 10.89 | 92.0 | 12.6 | 148 | | | |
| Surr: DNOP | 6.3 | | 5.000 | | 127 | 72.4 | 120 | | | S |

| Sample ID **1302919-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **103'+115' S32W @ 1** | Batch ID: **6278** | RunNo: **8907** |
| Prep Date: **2/28/2013** | Analysis Date: **3/1/2013** | SeqNo: **254689** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 56 | 10 | 50.00 | 10.89 | 89.9 | 12.6 | 148 | 1.89 | 22.5 | |
| Surr: DNOP | 6.2 | | 5.000 | | 125 | 72.4 | 120 | 0 | 0 | S |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302919**

*04-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **MB-6284** | SampType: **MBLK** | TestCode: **EPA Method 8015B: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6284** | RunNo: **8927** |
| Prep Date: **2/28/2013** | Analysis Date: **3/1/2013** | SeqNo: **254976** 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 | 1100 | | 1000 | | 108 | 84 | 116 | | | |

| Sample ID **LCS-6284** | SampType: **LCS** | TestCode: **EPA Method 8015B: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6284** | RunNo: **8927** |
| Prep Date: **2/28/2013** | Analysis Date: **3/1/2013** | SeqNo: **254977** 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 | 110 | 62.6 | 136 | | | |
| Surr: BFB | 1100 | | 1000 | | 113 | 84 | 116 | | | |

| Sample ID **1302917-002AMS** | SampType: **MS** | TestCode: **EPA Method 8015B: Gasoline Range** |
|---|---|---|
| Client ID: **BatchQC** | Batch ID: **6284** | RunNo: **8927** |
| Prep Date: **2/28/2013** | Analysis Date: **3/1/2013** | SeqNo: **254980** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 30 | 4.6 | 23.15 | 0 | 129 | 70 | 130 | | | |
| Surr: BFB | 1100 | | 925.9 | | 119 | 84 | 116 | | | S |

| Sample ID **1302917-002AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015B: Gasoline Range** |
|---|---|---|
| Client ID: **BatchQC** | Batch ID: **6284** | RunNo: **8927** |
| Prep Date: **2/28/2013** | Analysis Date: **3/1/2013** | SeqNo: **254981** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 31 | 4.6 | 22.98 | 0 | 135 | 70 | 130 | 4.21 | 22.1 | S |
| Surr: BFB | 1100 | | 919.1 | | 117 | 84 | 116 | 0 | 0 | S |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1302919**

***04-Mar-13***

**Client:** Blagg Engineering

**Project:** Ulibarri GC 2

| Sample ID **MB-6284** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6284** | RunNo: **8927** |
| Prep Date: **2/28/2013** | Analysis Date: **3/1/2013** | SeqNo: **255094** 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 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 108 | 80 | 120 | | | |

| Sample ID **LCS-6284** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6284** | RunNo: **8927** |
| Prep Date: **2/28/2013** | Analysis Date: **3/1/2013** | SeqNo: **255100** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.94 | 0.050 | 1.000 | 0 | 94.1 | 80 | 120 | | | |
| Toluene | 0.93 | 0.050 | 1.000 | 0 | 93.0 | 80 | 120 | | | |
| Ethylbenzene | 0.93 | 0.050 | 1.000 | 0 | 92.8 | 80 | 120 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 93.9 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 112 | 80 | 120 | | | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*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: BLAGG Work Order Number: 1302919

Received by/date: AG 02/28/13

Logged By: **Michelle Garcia** 2/28/2013 9:59:00 AM Michelle Garcia

Completed By: **Michelle Garcia** 2/28/2013 10:25:39 AM Michelle Garcia

Reviewed By: TO 02/28/2013

## Chain of Custody

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

## Log In

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

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

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. **Cooler Information**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.9 | Good | Yes | | | |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303189**

*08-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

Sample ID **MB-6369** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **6369** RunNo: **9043**
Prep Date: **3/7/2013** Analysis Date: **3/7/2013** SeqNo: **257814** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 1.5 | | | | | | | | |

Sample ID **LCS-6369** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **6369** RunNo: **9043**
Prep Date: **3/7/2013** Analysis Date: **3/7/2013** SeqNo: **257815** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 15 | 1.5 | 15.00 | 0 | 97.5 | 90 | 110 | | | |

Sample ID **1303187-001BMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **6369** RunNo: **9043**
Prep Date: **3/7/2013** Analysis Date: **3/7/2013** SeqNo: **257817** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 16 | 7.5 | 15.00 | 3.438 | 86.3 | 64.4 | 117 | | | |

Sample ID **1303187-001BMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **6369** RunNo: **9043**
Prep Date: **3/7/2013** Analysis Date: **3/7/2013** SeqNo: **257818** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 16 | 7.5 | 15.00 | 3.438 | 87.0 | 64.4 | 117 | 0.675 | 20 | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303189**

*08-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **MB-6353** | SampType: **MBLK** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6353** | RunNo: **9026** |
| Prep Date: **3/6/2013** | Analysis Date: **3/7/2013** | SeqNo: **257536** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 10 | | 10.00 | | 103 | 72.4 | 120 | | | |

| Sample ID **LCS-6353** | SampType: **LCS** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6353** | RunNo: **9026** |
| Prep Date: **3/6/2013** | Analysis Date: **3/7/2013** | SeqNo: **257611** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 46 | 10 | 50.00 | 0 | 92.7 | 47.4 | 122 | | | |
| Surr: DNOP | 5.3 | | 5.000 | | 106 | 72.4 | 120 | | | |

| Sample ID **1303187-001AMS** | SampType: **MS** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **BatchQC** | Batch ID: **6353** | RunNo: **9026** |
| Prep Date: **3/6/2013** | Analysis Date: **3/7/2013** | SeqNo: **257721** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 47 | 9.7 | 48.45 | 0 | 97.0 | 12.6 | 148 | | | |
| Surr: DNOP | 5.1 | | 4.845 | | 106 | 72.4 | 120 | | | |

| Sample ID **1303187-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **BatchQC** | Batch ID: **6353** | RunNo: **9026** |
| Prep Date: **3/6/2013** | Analysis Date: **3/7/2013** | SeqNo: **257723** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 50 | 10 | 50.97 | 0 | 97.8 | 12.6 | 148 | 5.91 | 22.5 | |
| Surr: DNOP | 5.5 | | 5.097 | | 107 | 72.4 | 120 | 0 | 0 | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303189**

*08-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **MB-6355** | SampType: **MBLK** | TestCode: **EPA Method 8015B: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6355** | RunNo: **9042** |
| Prep Date: **3/6/2013** | Analysis Date: **3/7/2013** | SeqNo: **258090** 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 | 1100 | | 1000 | | 108 | 84 | 116 | | | |

| Sample ID **LCS-6355** | SampType: **LCS** | TestCode: **EPA Method 8015B: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6355** | RunNo: **9042** |
| Prep Date: **3/6/2013** | Analysis Date: **3/7/2013** | SeqNo: **258091** 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 | 110 | 62.6 | 136 | | | |
| Surr: BFB | 1200 | | 1000 | | 115 | 84 | 116 | | | |

| Sample ID **1303189-001AMS** | SampType: **MS** | TestCode: **EPA Method 8015B: Gasoline Range** |
|---|---|---|
| Client ID: **63' N74W @ 11'-13'** | Batch ID: **6355** | RunNo: **9042** |
| Prep Date: **3/6/2013** | Analysis Date: **3/7/2013** | SeqNo: **258112** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 29 | 4.8 | 23.85 | 0 | 119 | 70 | 130 | | | |
| Surr: BFB | 1100 | | 954.2 | | 115 | 84 | 116 | | | |

| Sample ID **1303189-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015B: Gasoline Range** |
|---|---|---|
| Client ID: **63' N74W @ 11'-13'** | Batch ID: **6355** | RunNo: **9042** |
| Prep Date: **3/6/2013** | Analysis Date: **3/7/2013** | SeqNo: **258113** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 28 | 4.8 | 23.85 | 0 | 116 | 70 | 130 | 3.06 | 22.1 | |
| Surr: BFB | 1100 | | 954.2 | | 115 | 84 | 116 | 0 | 0 | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303189**

*08-Mar-13*

**Client:** Blagg Engineering

**Project:** Ulibarri GC 2

| Sample ID **MB-6355** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6355** | RunNo: **9042** |
| Prep Date: **3/6/2013** | Analysis Date: **3/7/2013** | SeqNo: **258139** 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 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 106 | 80 | 120 | | | |

| Sample ID **LCS-6355** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6355** | RunNo: **9042** |
| Prep Date: **3/6/2013** | Analysis Date: **3/7/2013** | SeqNo: **258140** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.94 | 0.050 | 1.000 | 0 | 94.2 | 80 | 120 | | | |
| Toluene | 0.93 | 0.050 | 1.000 | 0 | 93.1 | 80 | 120 | | | |
| Ethylbenzene | 0.92 | 0.050 | 1.000 | 0 | 91.6 | 80 | 120 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 92.5 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 109 | 80 | 120 | | | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*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: BLAGG Work Order Number: 1303189

Received by/date: AG 03/06/13

Logged By: **Michelle Garcia** 3/6/2013 9:53:00 AM Michelle Garcia

Completed By: **Michelle Garcia** 3/6/2013 10:17:10 AM Michelle Garcia

Reviewed By: TO 03/06/2013

## Chain of Custody

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

## Log In

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

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

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. Cooler Information

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303382**

*14-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

Sample ID **MB-6415** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **6415** RunNo: **9111**
Prep Date: **3/11/2013** Analysis Date: **3/11/2013** SeqNo: **259480** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 1.5 | | | | | | | | |

Sample ID **LCS-6415** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **6415** RunNo: **9111**
Prep Date: **3/11/2013** Analysis Date: **3/11/2013** SeqNo: **259481** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 15 | 1.5 | 15.00 | 0 | 97.2 | 90 | 110 | | | |

Sample ID **1303374-001BMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **6415** RunNo: **9111**
Prep Date: **3/11/2013** Analysis Date: **3/11/2013** SeqNo: **259483** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 30 | 15.00 | 6.318 | 76.4 | 64.4 | 117 | | | |

Sample ID **1303374-001BMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **6415** RunNo: **9111**
Prep Date: **3/11/2013** Analysis Date: **3/11/2013** SeqNo: **259484** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 30 | 15.00 | 6.318 | 80.8 | 64.4 | 117 | 0 | 20 | |

Sample ID **1303395-001AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **6415** RunNo: **9111**
Prep Date: **3/11/2013** Analysis Date: **3/11/2013** SeqNo: **259494** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 16 | 7.5 | 15.00 | 3.320 | 86.7 | 64.4 | 117 | | | |

Sample ID **1303395-001AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **6415** RunNo: **9111**
Prep Date: **3/11/2013** Analysis Date: **3/11/2013** SeqNo: **259495** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 16 | 7.5 | 15.00 | 3.320 | 82.0 | 64.4 | 117 | 4.39 | 20 | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303382**

*14-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID | MB-6403 | SampType: | MBLK | | TestCode: | EPA Method 8015B: Diesel Range Organics | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBS | Batch ID: | 6403 | | RunNo: | 9086 | | | | |
| Prep Date: | 3/8/2013 | Analysis Date: | 3/11/2013 | | SeqNo: | 258731 | Units: | mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 11 | | 10.00 | | 105 | 72.4 | 120 | | | |

| Sample ID | LCS-6403 | SampType: | LCS | | TestCode: | EPA Method 8015B: Diesel Range Organics | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSS | Batch ID: | 6403 | | RunNo: | 9086 | | | | |
| Prep Date: | 3/8/2013 | Analysis Date: | 3/11/2013 | | SeqNo: | 259007 | 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 | 100 | 47.4 | 122 | | | |
| Surr: DNOP | 5.6 | | 5.000 | | 112 | 72.4 | 120 | | | |

| Sample ID | 1303336-001AMS | SampType: | MS | | TestCode: | EPA Method 8015B: Diesel Range Organics | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | BatchQC | Batch ID: | 6403 | | RunNo: | 9099 | | | | |
| Prep Date: | 3/8/2013 | Analysis Date: | 3/12/2013 | | SeqNo: | 259283 | Units: | mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 52 | 9.7 | 48.73 | 0 | 107 | 12.6 | 148 | | | |
| Surr: DNOP | 5.0 | | 4.873 | | 102 | 72.4 | 120 | | | |

| Sample ID | 1303336-001AMSD | SampType: | MSD | | TestCode: | EPA Method 8015B: Diesel Range Organics | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | BatchQC | Batch ID: | 6403 | | RunNo: | 9099 | | | | |
| Prep Date: | 3/8/2013 | Analysis Date: | 3/12/2013 | | SeqNo: | 259284 | Units: | mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 58 | 10 | 51.76 | 0 | 113 | 12.6 | 148 | 11.5 | 22.5 | |
| Surr: DNOP | 5.5 | | 5.176 | | 106 | 72.4 | 120 | 0 | 0 | |

| Sample ID | MB-6400 | SampType: | MBLK | | TestCode: | EPA Method 8015B: Diesel Range Organics | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBS | Batch ID: | 6400 | | RunNo: | 9099 | | | | |
| Prep Date: | 3/8/2013 | Analysis Date: | 3/12/2013 | | SeqNo: | 259673 | Units: | %REC | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 10 | | 10.00 | | 102 | 72.4 | 120 | | | |

| Sample ID | LCS-6400 | SampType: | LCS | | TestCode: | EPA Method 8015B: Diesel Range Organics | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSS | Batch ID: | 6400 | | RunNo: | 9099 | | | | |
| Prep Date: | 3/8/2013 | Analysis Date: | 3/12/2013 | | SeqNo: | 259675 | Units: | %REC | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 5.1 | | 5.000 | | 101 | 72.4 | 120 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303382**

*14-Mar-13*

**Client:** Blagg Engineering

**Project:** Ulibarri GC 2

| Sample ID | **1303331-001AMS** | SampType: | **MS** | | TestCode: | **EPA Method 8015B: Diesel Range Organics** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BatchQC** | Batch ID: | **6400** | | RunNo: | **9099** | | | | |
| Prep Date: | **3/8/2013** | Analysis Date: | **3/12/2013** | | SeqNo: | **259695** | Units: | **%REC** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 5.6 | | 5.198 | | 108 | 72.4 | 120 | | | |

| Sample ID | **1303331-001AMSD** | SampType: | **MSD** | | TestCode: | **EPA Method 8015B: Diesel Range Organics** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BatchQC** | Batch ID: | **6400** | | RunNo: | **9099** | | | | |
| Prep Date: | **3/8/2013** | Analysis Date: | **3/12/2013** | | SeqNo: | **259748** | Units: | **%REC** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 5.0 | | 4.780 | | 105 | 72.4 | 120 | 0 | 0 | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303382**

*14-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **5ml rb** | SampType: **MBLK** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **R9062** | RunNo: **9062** |
| Prep Date: | Analysis Date: **3/8/2013** | SeqNo: **258899** 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 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.44 | | 0.5000 | | 88.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.51 | | 0.5000 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.46 | | 0.5000 | | 92.3 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.47 | | 0.5000 | | 93.2 | 70 | 130 | | | |

| Sample ID **100ng lcs** | SampType: **LCS** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **R9062** | RunNo: **9062** |
| Prep Date: | Analysis Date: **3/8/2013** | SeqNo: **258900** 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 | 108 | 70 | 130 | | | |
| Toluene | 1.0 | 0.050 | 1.000 | 0 | 104 | 80 | 120 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.45 | | 0.5000 | | 89.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.49 | | 0.5000 | | 97.3 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.48 | | 0.5000 | | 95.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.46 | | 0.5000 | | 91.2 | 70 | 130 | | | |

| Sample ID **1303370-001a ms** | SampType: **MS** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **BatchQC** | Batch ID: **R9062** | RunNo: **9062** |
| Prep Date: | Analysis Date: **3/9/2013** | SeqNo: **258910** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.69 | 0.050 | 0.6741 | 0.003526 | 101 | 67.5 | 124 | | | |
| Toluene | 0.71 | 0.050 | 0.6741 | 0 | 106 | 55.8 | 142 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.30 | | 0.3370 | | 89.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.32 | | 0.3370 | | 93.7 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.31 | | 0.3370 | | 93.2 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.33 | | 0.3370 | | 96.9 | 70 | 130 | | | |

| Sample ID **1303370-001a msd** | SampType: **MSD** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **BatchQC** | Batch ID: **R9062** | RunNo: **9062** |
| Prep Date: | Analysis Date: **3/9/2013** | SeqNo: **258911** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.72 | 0.050 | 0.6741 | 0.003526 | 107 | 67.5 | 124 | 5.09 | 20 | |
| Toluene | 0.71 | 0.050 | 0.6741 | 0 | 105 | 55.8 | 142 | 0.0834 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 0.31 | | 0.3370 | | 92.7 | 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 |
| 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#: **1303382**

*14-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

Sample ID **1303370-001a msd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **R9062** RunNo: **9062**
Prep Date: Analysis Date: **3/9/2013** SeqNo: **258911** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 0.31 | | 0.3370 | | 91.9 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 0.33 | | 0.3370 | | 98.4 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 0.34 | | 0.3370 | | 99.5 | 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 |
| 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#: **1303382**

*14-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **5ml rb** | SampType: **MBLK** | TestCode: **EPA Method 8015B Mod: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **R9062** | RunNo: **9062** |
| Prep Date: | Analysis Date: **3/8/2013** | SeqNo: **258886** 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 | 510 | | 500.0 | | 102 | 70 | 130 | | | |

| Sample ID **2.5ug gro lcs** | SampType: **LCS** | TestCode: **EPA Method 8015B Mod: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **R9062** | RunNo: **9062** |
| Prep Date: | Analysis Date: **3/8/2013** | SeqNo: **258889** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 25 | 5.0 | 25.00 | 0 | 102 | 74.6 | 137 | | | |
| Surr: BFB | 460 | | 500.0 | | 91.8 | 70 | 130 | | | |

| Sample ID **1303374-001a ms g** | SampType: **MS** | TestCode: **EPA Method 8015B Mod: Gasoline Range** |
|---|---|---|
| Client ID: **BatchQC** | Batch ID: **R9062** | RunNo: **9062** |
| Prep Date: | Analysis Date: **3/9/2013** | SeqNo: **258897** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 18 | 5.0 | 18.76 | 0 | 96.9 | 50.3 | 148 | | | |
| Surr: BFB | 340 | | 375.2 | | 89.9 | 70 | 130 | | | |

| Sample ID **1303374-001a msd g** | SampType: **MSD** | TestCode: **EPA Method 8015B Mod: Gasoline Range** |
|---|---|---|
| Client ID: **BatchQC** | Batch ID: **R9062** | RunNo: **9062** |
| Prep Date: | Analysis Date: **3/9/2013** | SeqNo: **258898** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 18 | 5.0 | 18.76 | 0 | 95.8 | 50.3 | 148 | 1.12 | 20 | |
| Surr: BFB | 340 | | 375.2 | | 90.8 | 70 | 130 | 0 | 0 | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*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: BLAGG Work Order Number: 1303382

Received by/date: MG 03/08/13

Logged By: Anne Thorne 3/8/2013 10:00:00 AM Anne Thorne

Completed By: Anne Thorne 3/8/2013 Anne Thorne

Reviewed By: 03/08/13

## Chain of Custody

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

## Log In

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

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

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. Cooler Information

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303448**

*18-Mar-13*

**Client:** Blagg Engineering

**Project:** Ulibarri GC 2

| Sample ID | **MB-6444** | SampType: | **MBLK** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **6444** | | RunNo: | **9153** | | | | |
| Prep Date: | **3/12/2013** | Analysis Date: | **3/12/2013** | | SeqNo: | **260379** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | **LCS-6444** | SampType: | **LCS** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: | **6444** | | RunNo: | **9153** | | | | |
| Prep Date: | **3/12/2013** | Analysis Date: | **3/12/2013** | | SeqNo: | **260380** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 94.2 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| 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#: **1303448**

*18-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **MB-6447** | SampType: **MBLK** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6447** | RunNo: **9140** |
| Prep Date: **3/12/2013** | Analysis Date: **3/13/2013** | SeqNo: **260075** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 11 | | 10.00 | | 106 | 72.4 | 120 | | | |

| Sample ID **LCS-6447** | SampType: **LCS** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6447** | RunNo: **9140** |
| Prep Date: **3/12/2013** | Analysis Date: **3/13/2013** | SeqNo: **260076** 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 | 93.5 | 47.4 | 122 | | | |
| Surr: DNOP | 5.3 | | 5.000 | | 106 | 72.4 | 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 |
| 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#: **1303448**

*18-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC 2

| Sample ID **mb-6404** | SampType: **MBLK** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **R9157** | RunNo: **9157** |
| Prep Date: **3/8/2013** | Analysis Date: **3/13/2013** | SeqNo: **261103** 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 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.43 | | 0.5000 | | 86.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.45 | | 0.5000 | | 89.4 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.45 | | 0.5000 | | 90.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.51 | | 0.5000 | | 101 | 70 | 130 | | | |

| Sample ID **lcs-6404** | SampType: **LCS** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **R9157** | RunNo: **9157** |
| Prep Date: **3/8/2013** | Analysis Date: **3/13/2013** | SeqNo: **261104** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.99 | 0.050 | 1.000 | 0 | 98.6 | 70 | 130 | | | |
| Toluene | 1.1 | 0.050 | 1.000 | 0 | 106 | 80 | 120 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.45 | | 0.5000 | | 90.2 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.44 | | 0.5000 | | 87.6 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.45 | | 0.5000 | | 91.0 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.51 | | 0.5000 | | 102 | 70 | 130 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303448**

*18-Mar-13*

**Client:** Blagg Engineering

**Project:** Ulibarri GC 2

| Sample ID **MB-6404** | SampType: **MBLK** | TestCode: **EPA Method 8015B Mod: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **R9157** | RunNo: **9157** |
| Prep Date: **3/8/2013** | Analysis Date: **3/13/2013** | SeqNo: **261076** 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 | 450 | | 500.0 | | 89.4 | 70 | 130 | | | |

| Sample ID **lcs-6404 g** | SampType: **LCS** | TestCode: **EPA Method 8015B Mod: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **R9157** | RunNo: **9157** |
| Prep Date: | Analysis Date: **3/13/2013** | SeqNo: **261077** 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 | 74.6 | 137 | | | |
| Surr: BFB | 450 | | 500.0 | | 89.5 | 70 | 130 | | | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: BLAGG Work Order Number: 1303448

Received by/date: AG 03/12/13

Logged By: **Michelle Garcia** 3/12/2013 9:53:00 AM Michelle Garcia

Completed By: **Michelle Garcia** 3/12/2013 10:14:07 AM Michelle Garcia

Reviewed By: IO 03/22/2013

## Chain of Custody

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

## Log In

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

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

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. **Cooler Information**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303582**

*19-Mar-13*

**Client:** Blagg Engineering

**Project:** Ulibarri GC #2

| Sample ID: **MB-6533** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6533** | RunNo: **9265** |
| Prep Date: **3/18/2013** | Analysis Date: **3/18/2013** | SeqNo: **264222** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID: **LCS-6533** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6533** | RunNo: **9265** |
| Prep Date: **3/18/2013** | Analysis Date: **3/18/2013** | SeqNo: **264223** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 14 | 1.5 | 15.00 | 0 | 95.5 | 90 | 110 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303582**

*19-Mar-13*

**Client:** Blagg Engineering

**Project:** Ulibarri GC #2

| Sample ID: **MB-6483** | SampType: **MBLK** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **6483** | RunNo: **9209** |
| Prep Date: **3/14/2013** | Analysis Date: **3/16/2013** | SeqNo: **262137** Units: **%REC** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 12 | | 10.00 | | 117 | 72.4 | 120 | | | |

| Sample ID: **LCS-6483** | SampType: **LCS** | TestCode: **EPA Method 8015B: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **6483** | RunNo: **9209** |
| Prep Date: **3/14/2013** | Analysis Date: **3/16/2013** | SeqNo: **262138** Units: **%REC** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 5.3 | | 5.000 | | 106 | 72.4 | 120 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303582**

*19-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC #2

Sample ID: **MB-6486** SampType: **MBLK** TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **PBS** Batch ID: **6486** RunNo: **9235**
Prep Date: **3/14/2013** Analysis Date: **3/16/2013** SeqNo: **262753** Units: **%REC**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: BFB | 900 | | 1000 | | 90.0 | 84 | 116 | | | |

Sample ID: **LCS-6486** SampType: **LCS** TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **LCSS** Batch ID: **6486** RunNo: **9235**
Prep Date: **3/14/2013** Analysis Date: **3/16/2013** SeqNo: **262755** Units: **%REC**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: BFB | 940 | | 1000 | | 93.5 | 84 | 116 | | | |

Sample ID: **MB-6496** SampType: **MBLK** TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **PBS** Batch ID: **6496** RunNo: **9235**
Prep Date: **3/15/2013** Analysis Date: **3/17/2013** SeqNo: **262840** 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 | 920 | | 1000 | | 91.7 | 84 | 116 | | | |

Sample ID: **LCS-6496** SampType: **LCS** TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **LCSS** Batch ID: **6496** RunNo: **9235**
Prep Date: **3/15/2013** Analysis Date: **3/17/2013** SeqNo: **262848** 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 | 62.6 | 136 | | | |
| Surr: BFB | 950 | | 1000 | | 95.2 | 84 | 116 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1303582**

*19-Mar-13*

**Client:** Blagg Engineering
**Project:** Ulibarri GC #2

Sample ID: **MB-6486** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **6486** RunNo: **9235**
Prep Date: **3/14/2013** Analysis Date: **3/16/2013** SeqNo: **262878** Units: **%REC**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 0.98 | | 1.000 | | 98.1 | 80 | 120 | | | |

Sample ID: **LCS-6486** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **6486** RunNo: **9235**
Prep Date: **3/14/2013** Analysis Date: **3/16/2013** SeqNo: **262879** Units: **%REC**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 102 | 80 | 120 | | | |

Sample ID: **MB-6496** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **6496** RunNo: **9235**
Prep Date: **3/15/2013** Analysis Date: **3/17/2013** SeqNo: **262892** 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 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.99 | | 1.000 | | 98.8 | 80 | 120 | | | |

Sample ID: **LCS-6496** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **6496** RunNo: **9235**
Prep Date: **3/15/2013** Analysis Date: **3/17/2013** SeqNo: **262893** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.91 | 0.050 | 1.000 | 0 | 91.4 | 80 | 120 | | | |
| Toluene | 0.95 | 0.050 | 1.000 | 0 | 94.7 | 80 | 120 | | | |
| Ethylbenzene | 0.96 | 0.050 | 1.000 | 0 | 95.7 | 80 | 120 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 100 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 103 | 80 | 120 | | | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1303582

Received by/date: MG 03/14/13

Logged By: Lindsay Mangin 3/14/2013 10:00:00 AM

Completed By: Lindsay Mangin 3/14/2013 4:04:17 PM

Reviewed By: 03/14/13

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Were seals intact? | Yes ✓ | No | Not Present |
| 2. Is Chain of Custody complete? | Yes ✓ | No | Not Present |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Coolers are present? (see 19. for cooler specific information) | Yes ✓ | No | NA |
| 5. Was an attempt made to cool the samples? | Yes ✓ | No | NA |
| 6. Were all samples received at a temperature of >0° C to 6.0°C | Yes ✓ | No | NA |
| 7. Sample(s) in proper container(s)? | Yes ✓ | No | |
| 8. Sufficient sample volume for indicated test(s)? | Yes ✓ | No | |
| 9. Are samples (except VOA and ONG) properly preserved? | Yes ✓ | No | |
| 10. Was preservative added to bottles? | Yes | No ✓ | NA |
| 11. VOA vials have zero headspace? | Yes | No | No VOA Vials ✓ |
| 12. Were any sample containers received broken? | Yes | No ✓ | |
| 13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ✓ | No | # of preserved bottles checked for pH: |
| 14. Are matrices correctly identified on Chain of Custody? | Yes ✓ | No | (<2 or >12 unless noted) |
| 15. Is it clear what analyses were requested? | Yes ✓ | No | Adjusted? |
| 16. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ✓ | No | Checked by: |

## Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes No NA ✓

Person Notified: Date:

By Whom: Via: eMail Phone Fax In Person

Regarding:

Client Instructions:

18. Additional remarks:

19. Cooler Information

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1305026**

*16-May-13*

**Client:** Blagg Engineering

**Project:** ULIBARRI GC # 1A/#2

| Sample ID **MB** | SampType: **MBLK** | TestCode: **EPA Method 200.7: Dissolved Metals** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R10516** | RunNo: **10516** |
| Prep Date: | Analysis Date: **5/9/2013** | SeqNo: **297227** Units: **mg/L** |

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

| Sample ID **LCS** | SampType: **LCS** | TestCode: **EPA Method 200.7: Dissolved Metals** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R10516** | RunNo: **10516** |
| Prep Date: | Analysis Date: **5/9/2013** | SeqNo: **297228** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 0.51 | 0.020 | 0.5000 | 0 | 102 | 85 | 115 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| P | Sample pH greater than 2 for VOA and TOC only. | 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#: **1305026**

*16-May-13*

**Client:** Blagg Engineering
**Project:** ULIBARRI GC # 1A/#2

| Sample ID **MB** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R10269** | RunNo: **10269** |
| Prep Date: | Analysis Date: **5/1/2013** | SeqNo: **292821** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.10 | | | | | | | | |
| Chloride | ND | 0.50 | | | | | | | | |

| Sample ID **LCS-b** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R10269** | RunNo: **10269** |
| Prep Date: | Analysis Date: **5/1/2013** | SeqNo: **292823** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.47 | 0.10 | 0.5000 | 0 | 94.7 | 90 | 110 | | | |
| Chloride | 4.6 | 0.50 | 5.000 | 0 | 92.5 | 90 | 110 | | | |

| Sample ID **MB** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R10292** | RunNo: **10292** |
| Prep Date: | Analysis Date: **5/2/2013** | SeqNo: **293414** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | |
| Nitrate+Nitrite as N | ND | 0.20 | | | | | | | | |

| Sample ID **LCS** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R10292** | RunNo: **10292** |
| Prep Date: | Analysis Date: **5/2/2013** | SeqNo: **293415** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 9.5 | 0.50 | 10.00 | 0 | 95.1 | 90 | 110 | | | |
| Nitrate+Nitrite as N | 3.4 | 0.20 | 3.500 | 0 | 96.1 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| P | Sample pH greater than 2 for VOA and TOC only. | 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#: **1305026**

*16-May-13*

**Client:** Blagg Engineering
**Project:** ULIBARRI GC # 1A/#2

| Sample ID **5ML RB** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R10280** | RunNo: **10280** |
| Prep Date: | Analysis Date: **5/2/2013** | SeqNo: **293191** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 20 | | 20.00 | | 102 | 69.4 | 129 | | | |

| Sample ID **100NG BTEX LCS** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R10280** | RunNo: **10280** |
| Prep Date: | Analysis Date: **5/2/2013** | SeqNo: **293192** 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 | 80 | 120 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 100 | 80 | 120 | | | |
| Ethylbenzene | 20 | 1.0 | 20.00 | 0 | 100 | 80 | 120 | | | |
| Xylenes, Total | 61 | 2.0 | 60.00 | 0 | 101 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 21 | | 20.00 | | 105 | 69.4 | 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 |
| P | Sample pH greater than 2 for VOA and TOC only. | 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#: **1305026**

*16-May-13*

**Client:** Blagg Engineering

**Project:** ULIBARRI GC # 1A/#2

| Sample ID **MB-7282** | SampType: **MBLK** | TestCode: **SM2540C MOD: Total Dissolved Solids** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **7282** | RunNo: **10312** |
| Prep Date: **5/3/2013** | Analysis Date: **5/5/2013** | SeqNo: **293852** 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-7282** | SampType: **LCS** | TestCode: **SM2540C MOD: Total Dissolved Solids** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **7282** | RunNo: **10312** |
| Prep Date: **5/3/2013** | Analysis Date: **5/5/2013** | SeqNo: **293853** Units: **mg/L** |

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

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: BLAGG | Work Order Number: 1305026 | RcptNo: 1

Received by/date: 05/01/13

Logged By: Lindsay Mangin 5/1/2013 9:50:00 AM

Completed By: Lindsay Mangin 5/1/2013 1:12:37 PM

Reviewed By: 05/01/2013

## 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: 12 (<2 or >12 unless noted)

Adjusted? NO

Checked by:

## Special Handling (if applicable)

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

Person Notified: ____ Date: ____

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

Regarding: ____

Client Instructions: ____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 2.6 | Good | Yes | | | |