

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

AUG 11 2015

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: Steve Moskal           |
| Address: 200 Energy Court, Farmington, NM 87401 | Telephone No.: 505-326-9497     |
| Facility Name: Stewart LS 8                     | Facility Type: Natural gas well |
| Surface Owner: Federal                          | Mineral Owner: Private          |
| API No. 3004509125                              |                                 |

## LOCATION OF RELEASE

|                  |               |                 |              |                        |                           |                        |                        |                  |
|------------------|---------------|-----------------|--------------|------------------------|---------------------------|------------------------|------------------------|------------------|
| Unit Letter<br>N | Section<br>28 | Township<br>30N | Range<br>10W | Feet from the<br>1,060 | North/South Line<br>South | Feet from the<br>1,650 | East/West Line<br>West | County: San Juan |
|------------------|---------------|-----------------|--------------|------------------------|---------------------------|------------------------|------------------------|------------------|

Latitude 36.77838

Longitude -107.89219

## NATURE OF RELEASE


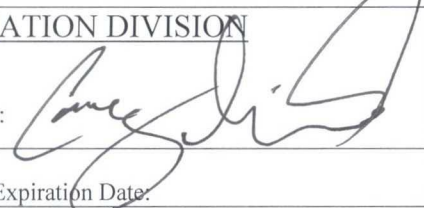
|  |   |  |
|--|---|--|
| Type of Release: condensate/oil  | Volume of Release: unknown                | Volume Recovered: none                                 |
| Source of Release: Below Grade Tank (BGT) – 95 bbl   | Date and Hour of Occurrence:<br>unknown   | Date and Hour of Discovery: February 5,<br>2015; 11:30 |
| Was Immediate Notice Given?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required | If YES, To Whom?                          |  |
| By Whom?   | Date and Hour:                            |  |
| Was a Watercourse Reached?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  | If YES, Volume Impacting the Watercourse. |  |
| If a Watercourse was Impacted, Describe Fully.*  |   |  |

## Describe Cause of Problem and Remedial Action Taken.\* SUPPLEMENTAL INFORMATION

During upgrade of 95 bbl below grade tank, contaminated soil was discovered. Impacted soil was excavated and removed.

Describe Area Affected and Cleanup Action Taken.\* The area of impact was excavated to approximately 78' x 60' x 19.5' in depth. No water was encountered. Laboratory analysis the final extents of the excavation to be below soil remediation standards. 1,400 cubic yards of soils was excavated and transported offsite for disposal.

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:  |  | OIL CONSERVATION DIVISION   |                  |
| Printed Name: Steve Moskal   |  | Approved by Environmental Specialist:  |                  |
| Title: Field Environmental Coordinator   |  | Approval Date: 8/12/15  | Expiration Date: |
| E-mail Address: steven.moskal@bp.com   |  | Conditions of Approval:   |                  |
| Date: August 6, 2015 Phone: 505-326-9497   |  | Attached <input type="checkbox"/>   |                  |

\* Attach Additional Sheets If Necessary

#N5K 151 325 4193

**BP America: Stewart LS 8**  
**(N) Sec 28 – T30N – R10W**  
**API: 30-045-09125**  
**San Juan County, New Mexico**

Summary Record of Impact Remediation

February 5, 2015 Soils impacted with hydrocarbons encountered during upgrade of the 95 barrel BGT. Laboratory testing of soils immediately below the BGT determined the total petroleum hydrocarbon (TPH) content at 1,380 mg/Kg by U.S. EPA Method 8015B. Chlorides were tested at less than 30 mg/Kg and total BTEX was reported at 109 mg/Kg. The BGT was situated within a dense bedrock.

The site NMOCD/BLM closure standard was determined at 100 ppm TPH based on:

Horizontal Distance to dry arroyo 165 feet (20 points)

Nearest Water Well > 1,000 feet (0 points)

Depth to Groundwater Between >100 feet (0 points)

April 13, 2015 Work crew initiates excavation of site hydrocarbon impacts. The sandstone that surrounded the BGT was excavated to a size of 30' x 27' x 19.5' deep. A base grab sample field tested OVM = 109 ppm, South Sidewall 3-point composite field tested OVM = 1,048 ppm and West Sidewall 3-point composite field tested OVM = 1,076 ppm. Samples were submitted to Hall Environmental Labs for testing of TPH, BTEX and Chlorides:

| Sample ID                | Sample Date | Map ID | TPH 8015B<br>(mg/Kg) | Total BTEX<br>(mg/Kg) | Benzene<br>(mg/Kg) | Comments                  |
|--------------------------|-------------|--------|----------------------|-----------------------|--------------------|---------------------------|
| Base Grab @ 19.5'        | 4/13/2015   | 1      | ND                   | 0.11                  | ND                 |                           |
| South Wall 3-pt 5' – 15' | 4/13/2015   | NA     | 290                  | 9.06                  | ND                 | Subsequently<br>Excavated |
| West Wall 3-pt 5' – 15'  | 4/13/2015   | NA     | 2,300                | 45.1                  | ND                 | Subsequently<br>Excavated |

April 15, 2015 Excavation size approximately 45'x40'x19.5 feet deep. All sidewall sampling field test elevated OVM readings and excavation is continued in all directions.

April 20, 2015 Excavation size approximately 70' x 50' x 19.5 feet deep. Collect sidewall and base samples for laboratory testing of TPH, BTEX and Chlorides:

| Sample ID                | Sample Date | Map ID | TPH 8015B<br>(mg/Kg) | Total BTEX<br>(mg/Kg) | Benzene<br>(mg/Kg) | Comments                               |
|--------------------------|-------------|--------|----------------------|-----------------------|--------------------|--|
| West Wall 3-pt 5' – 15'  | 4/20/2015   | 2      | ND                   | ND                    | ND                 | Final Extent of<br>Excavation to West  |
| South Wall 3-pt 5' – 15' | 4/20/2015   | 3      | ND                   | ND                    | ND                 | Final Extent of<br>Excavation to South |
| East Wall 3-pt 5' – 15'  | 4/20/2015   | 4      | ND                   | ND                    | ND                 | Final Extent of<br>Excavation to East  |
| South Base 3-pt @ 21'    | 4/20/2015   | 5      | 6                    | 0.081                 | ND                 |  |

April 21, 2015 Excavation size approximately 78' x 60' x 19.5' deep. Collect north wall, north east wall and north base samples for laboratory testing of TPH, BTEX and Chlorides:

| Sample ID                          | Sample Date | Map ID | TPH 8015B<br>(mg/Kg) | Total BTEX<br>(mg/Kg) | Benzene<br>(mg/Kg) | Comments                            |
|------------------------------------|-------------|--------|----------------------|-----------------------|--------------------|-------------------------------------|
| North Wall - West 3-pt<br>5' – 15' | 4/21/2015   | 6      | ND                   | ND                    | ND                 | Final Extent of<br>Excavation to NW |
| North Wall - East 3-pt<br>5' – 15' | 4/21/2015   | 7      | ND                   | ND                    | ND                 | Final Extent of<br>Excavation to NE |
| East Wall - North 3-pt<br>5' – 15' | 4/21/2015   | 8      | ND                   | ND                    | ND                 | Final Extent of<br>Excavation to NE |
| Base 3-pt @ 20' North<br>East Area | 4/21/2015   | 9      | ND                   | ND                    | ND                 |                                     |

April 28, 2015 Crew completes backfilling with clean fill. A replacement BGT (95 barrel double wall/double bottom) scheduled to be installed in the exact same location pursuant to an approved BGT permit. Approximate volume of soils removed and transported to BP Crouch Mesa Landfarm = 1,400 CY.



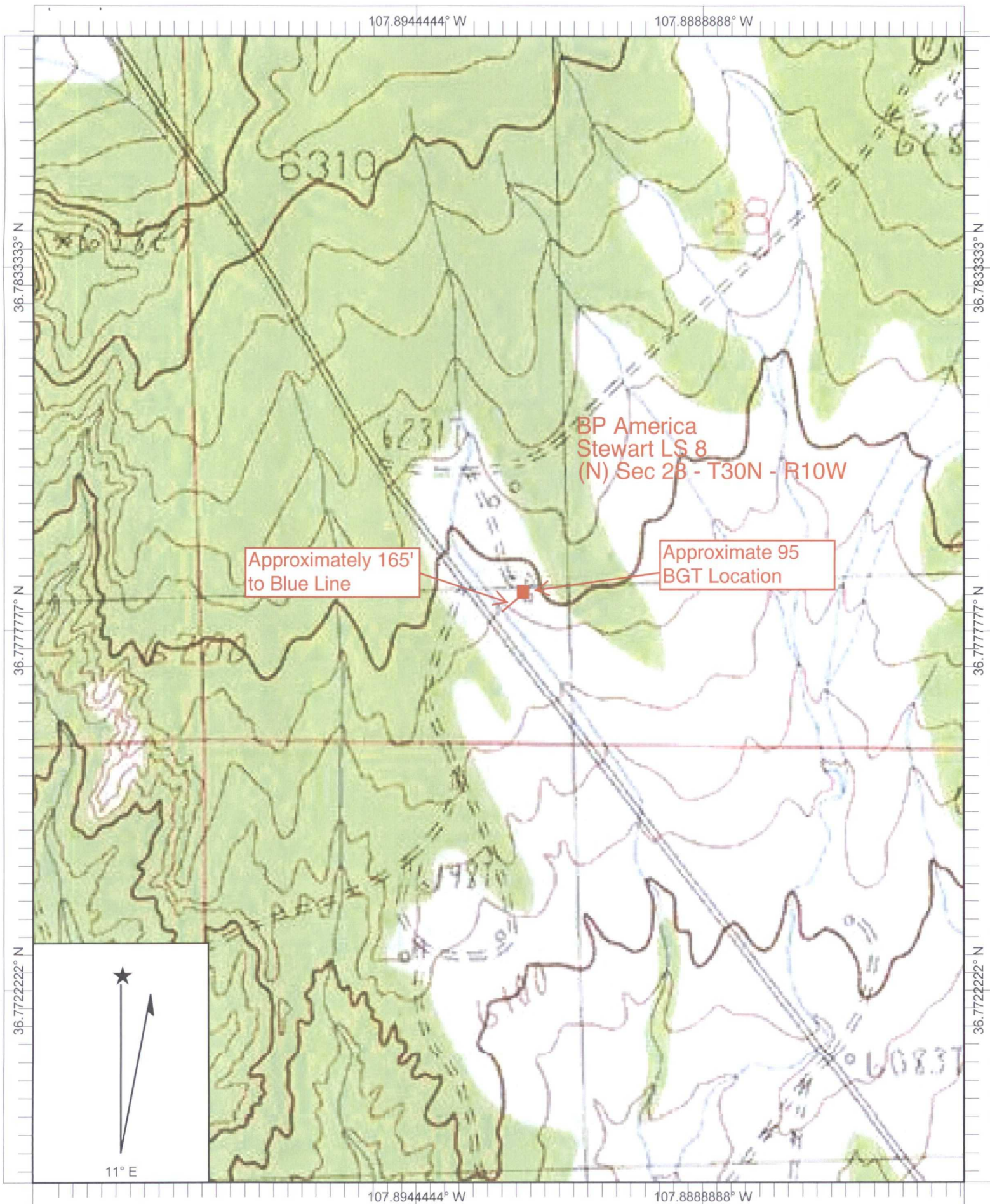


Stewart LS 8

Final Excavation Perimeter  
(78'x60'x19.5' deep)

Original 95 BGT Location






Name: AZTEC  
Date: 2/5/2015  
Scale: 1 inch equals 666 feet

Location: 036.7780754° N 107.8928546° W



An aerial photograph of a desert landscape. A light-colored, straight road runs diagonally from the bottom left towards the center. The surrounding terrain is sandy and covered with numerous small, dark, scrubby bushes. In the upper right quadrant, there is a small, light-colored, rectangular structure or building. A yellow line originates from the bottom left and points towards this structure.

Stewart LS 8

Approximately 165' to Dry Wash



**Analytical Report**Lab Order **1504587**Date Reported: **4/17/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** Base Grab @ 19.5'**Project:** Stewart LS 8**Collection Date:** 4/13/2015 2:20:00 PM**Lab ID:** 1504587-001**Matrix:** SOIL**Received Date:** 4/14/2015 7:10:00 AM

| Analyses                                       | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch               |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                       | Analyst: <b>BCN</b> |
| Diesel Range Organics (DRO)                    | ND     | 10       |      | mg/Kg | 1  | 4/14/2015 10:25:38 AM | 18676               |
| Surr: DNOP                                     | 90.2   | 63.5-128 |      | %REC  | 1  | 4/14/2015 10:25:38 AM | 18676               |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)                  | ND     | 4.8      |      | mg/Kg | 1  | 4/16/2015 9:24:32 AM  | 18677               |
| Surr: BFB                                      | 87.2   | 80-120   |      | %REC  | 1  | 4/16/2015 9:24:32 AM  | 18677               |
| <b>EPA METHOD 8021B: VOLATILES</b>             |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Benzene  | ND     | 0.048    |      | mg/Kg | 1  | 4/15/2015 10:25:13 AM | 18677               |
| Toluene  | ND     | 0.048    |      | mg/Kg | 1  | 4/15/2015 10:25:13 AM | 18677               |
| Ethylbenzene                                   | ND     | 0.048    |      | mg/Kg | 1  | 4/15/2015 10:25:13 AM | 18677               |
| Xylenes, Total                                 | 0.11   | 0.096    |      | mg/Kg | 1  | 4/15/2015 10:25:13 AM | 18677               |
| Surr: 4-Bromofluorobenzene                     | 99.7   | 80-120   |      | %REC  | 1  | 4/15/2015 10:25:13 AM | 18677               |
| <b>EPA METHOD 300.0: ANIONS</b>                |        |          |      |       |    |                       | Analyst: <b>JRR</b> |
| Chloride                                       | ND     | 30       |      | mg/Kg | 20 | 4/14/2015 12:56:00 PM | 18688               |

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

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

**Analytical Report**Lab Order **1504587**

Date Reported: 4/17/2015

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Project:** Stewart LS 8**Lab ID:** 1504587-002**Matrix:** SOIL**Client Sample ID:** South Wall 3-pt 5'-15'**Collection Date:** 4/13/2015 2:25:00 PM**Received Date:** 4/14/2015 7:10:00 AM

| Analyses                                       | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch               |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                       | Analyst: <b>BCN</b> |
| Diesel Range Organics (DRO)                    | 180    | 9.8      |      | mg/Kg | 1  | 4/14/2015 11:19:24 AM | 18676               |
| Surr: DNOP                                     | 101    | 63.5-128 |      | %REC  | 1  | 4/14/2015 11:19:24 AM | 18676               |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)                  | 110    | 24       |      | mg/Kg | 5  | 4/16/2015 9:53:16 AM  | 18677               |
| Surr: BFB                                      | 184    | 80-120   | S    | %REC  | 5  | 4/16/2015 9:53:16 AM  | 18677               |
| <b>EPA METHOD 8021B: VOLATILES</b>             |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Benzene  | ND     | 0.12     |      | mg/Kg | 5  | 4/15/2015 10:53:53 AM | 18677               |
| Toluene  | ND     | 0.24     |      | mg/Kg | 5  | 4/15/2015 10:53:53 AM | 18677               |
| Ethylbenzene                                   | 0.46   | 0.24     |      | mg/Kg | 5  | 4/15/2015 10:53:53 AM | 18677               |
| Xylenes, Total                                 | 8.6    | 0.47     |      | mg/Kg | 5  | 4/15/2015 10:53:53 AM | 18677               |
| Surr: 4-Bromofluorobenzene                     | 111    | 80-120   |      | %REC  | 5  | 4/15/2015 10:53:53 AM | 18677               |
| <b>EPA METHOD 300.0: ANIONS</b>                |        |          |      |       |    |                       | Analyst: <b>JRR</b> |
| Chloride                                       | ND     | 30       |      | mg/Kg | 20 | 4/14/2015 1:08:25 PM  | 18688               |

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

|                    |   |   |    |  |
|--------------------|---|---|----|--|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH Not In Range                             |
|                    | 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:** West Wall 3-pt 5'-15'  
**Project:** Stewart LS 8 **Collection Date:** 4/13/2015 2:30:00 PM  
**Lab ID:** 1504587-003 **Matrix:** SOIL **Received Date:** 4/14/2015 7:10:00 AM

| Analyses                                       | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch               |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                       | Analyst: <b>BCN</b> |
| Diesel Range Organics (DRO)                    | 1000   | 10       |      | mg/Kg | 1  | 4/14/2015 11:46:14 AM | 18676               |
| Surr: DNOP                                     | 107    | 63.5-128 |      | %REC  | 1  | 4/14/2015 11:46:14 AM | 18676               |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)                  | 1300   | 47       |      | mg/Kg | 10 | 4/16/2015 10:21:57 AM | 18677               |
| Surr: BFB                                      | 878    | 80-120   | S    | %REC  | 10 | 4/16/2015 10:21:57 AM | 18677               |
| <b>EPA METHOD 8021B: VOLATILES</b>             |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Benzene  | ND     | 0.24     |      | mg/Kg | 10 | 4/15/2015 11:22:35 AM | 18677               |
| Toluene  | ND     | 0.47     |      | mg/Kg | 10 | 4/15/2015 11:22:35 AM | 18677               |
| Ethylbenzene                                   | 2.1    | 0.47     |      | mg/Kg | 10 | 4/15/2015 11:22:35 AM | 18677               |
| Xylenes, Total                                 | 43     | 0.94     |      | mg/Kg | 10 | 4/15/2015 11:22:35 AM | 18677               |
| Surr: 4-Bromofluorobenzene                     | 137    | 80-120   | S    | %REC  | 10 | 4/15/2015 11:22:35 AM | 18677               |
| <b>EPA METHOD 300.0: ANIONS</b>                |        |          |      |       |    |                       | Analyst: <b>JRR</b> |
| Chloride                                       | ND     | 30       |      | mg/Kg | 20 | 4/14/2015 1:20:50 PM  | 18688               |

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

|                    |   |   |    |  |
|--------------------|---|---|----|--|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH Not In Range                             |
|                    | 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#: 1504587

17-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|            |           |                |           |             |                          |          |           |      |          |      |
|------------|-----------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID  | MB-18688  | SampType:      | MBLK      | TestCode:   | EPA Method 300.0: Anions |          |           |      |          |      |
| Client ID: | PBS       | Batch ID:      | 18688     | RunNo:      | 25522                    |          |           |      |          |      |
| Prep Date: | 4/14/2015 | Analysis Date: | 4/14/2015 | SeqNo:      | 755890                   | Units:   | mg/Kg     |      |          |      |
| Analyte    | Result    | PQL            | SPK value | SPK Ref Val | %REC                     | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride   | ND        | 1.5            |           |             |                          |          |           |      |          |      |

|            |           |                |           |             |                          |          |           |      |          |      |
|------------|-----------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID  | LCS-18688 | SampType:      | LCS       | TestCode:   | EPA Method 300.0: Anions |          |           |      |          |      |
| Client ID: | LCSS      | Batch ID:      | 18688     | RunNo:      | 25522                    |          |           |      |          |      |
| Prep Date: | 4/14/2015 | Analysis Date: | 4/14/2015 | SeqNo:      | 755891                   | Units:   | mg/Kg     |      |          |      |
| Analyte    | Result    | PQL            | SPK value | SPK Ref Val | %REC                     | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride   | 14        | 1.5            | 15.00     | 0           | 92.3                     | 90       | 110       |      |          |      |

## Qualifiers:

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

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1504587

17-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|                             |           |     |                          |             |   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID                   | MB-18676  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | PBS       |     | Batch ID: 18676          |             | RunNo: 25490                                      |          |              |      |          |      |
| Prep Date:                  | 4/14/2015 |     | Analysis Date: 4/14/2015 |             | SeqNo: 754944                                     |          | 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   | 63.5     | 128          |      |          |      |

|                             |           |     |                          |             |   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID                   | LCS-18676 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 18676          |             | RunNo: 25490                                      |          |              |      |          |      |
| Prep Date:                  | 4/14/2015 |     | Analysis Date: 4/14/2015 |             | SeqNo: 754945                                     |          | 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           | 99.4  | 67.8     | 130          |      |          |      |
| Surr: DNOP                  | 4.9       |     | 5.000                    |             | 98.1  | 63.5     | 128          |      |          |      |

|                             |                   |     |                          |             |   |          |              |      |          |      |
|-----------------------------|-------------------|-----|--------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID                   | 1504587-001AMS    |     | SampType: MS             |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | Base Grab @ 19.5' |     | Batch ID: 18676          |             | RunNo: 25490                                      |          |              |      |          |      |
| Prep Date:                  | 4/14/2015         |     | Analysis Date: 4/14/2015 |             | SeqNo: 755000                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result            | PQL | SPK value                | SPK Ref Val | %REC  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 53                | 10  | 50.40                    | 6.048       | 93.9  | 29.2     | 176          |      |          |      |
| Surr: DNOP                  | 5.1               |     | 5.040                    |             | 100   | 63.5     | 128          |      |          |      |

|                             |                   |     |                          |             |   |          |              |      |          |      |
|-----------------------------|-------------------|-----|--------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID                   | 1504587-001AMSD   |     | SampType: MSD            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | Base Grab @ 19.5' |     | Batch ID: 18676          |             | RunNo: 25490                                      |          |              |      |          |      |
| Prep Date:                  | 4/14/2015         |     | Analysis Date: 4/14/2015 |             | SeqNo: 756198                                     |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result            | PQL | SPK value                | SPK Ref Val | %REC  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 51                | 9.8 | 49.12                    | 6.048       | 91.4  | 29.2     | 176          | 4.62 | 23       |      |
| Surr: DNOP                  | 5.0               |     | 4.912                    |             | 102   | 63.5     | 128          | 0    | 0        |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1504587

17-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|                               |           |                |           |             |                                  |          |           |      |          |      |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID                     | MB-18677  | SampType:      | MBLK      | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID:                    | PBS       | Batch ID:      | 18677     | RunNo:      | 25555                            |          |           |      |          |      |
| Prep Date:                    | 4/14/2015 | Analysis Date: | 4/16/2015 | SeqNo:      | 757250                           | 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                     | 850       |                | 1000      |             | 85.4                             | 80       | 120       |      |          |      |

|                               |           |                |           |             |                                  |          |           |      |          |      |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID                     | LCS-18677 | SampType:      | LCS       | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID:                    | LCSS      | Batch ID:      | 18677     | RunNo:      | 25555                            |          |           |      |          |      |
| Prep Date:                    | 4/14/2015 | Analysis Date: | 4/16/2015 | SeqNo:      | 757251                           | 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           | 102                              | 64       | 130       |      |          |      |
| Surr: BFB                     | 970       |                | 1000      |             | 97.1                             | 80       | 120       |      |          |      |

|                               |                   |                |           |             |                                  |          |           |      |          |      |
|-------------------------------|-------------------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID                     | 1504587-001AMS    | SampType:      | MS        | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID:                    | Base Grab @ 19.5' | Batch ID:      | 18677     | RunNo:      | 25555                            |          |           |      |          |      |
| Prep Date:                    | 4/14/2015         | Analysis Date: | 4/16/2015 | SeqNo:      | 757266                           | Units:   | mg/Kg     |      |          |      |
| Analyte                       | Result            | PQL            | SPK value | SPK Ref Val | %REC                             | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 23                | 4.8            | 23.99     | 0           | 97.4                             | 47.9     | 144       |      |          |      |
| Surr: BFB                     | 910               |                | 959.7     |             | 94.3                             | 80       | 120       |      |          |      |

|                               |                   |                |           |             |                                  |          |           |       |          |      |
|-------------------------------|-------------------|----------------|-----------|-------------|----------------------------------|----------|-----------|-------|----------|------|
| Sample ID                     | 1504587-001AMSD   | SampType:      | MSD       | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |       |          |      |
| Client ID:                    | Base Grab @ 19.5' | Batch ID:      | 18677     | RunNo:      | 25555                            |          |           |       |          |      |
| Prep Date:                    | 4/14/2015         | Analysis Date: | 4/16/2015 | SeqNo:      | 757267                           | Units:   | mg/Kg     |       |          |      |
| Analyte                       | Result            | PQL            | SPK value | SPK Ref Val | %REC                             | LowLimit | HighLimit | %RPD  | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24                | 4.8            | 23.97     | 0           | 98.5                             | 47.9     | 144       | 0.966 | 29.9     |      |
| Surr: BFB                     | 920               |                | 958.8     |             | 96.0                             | 80       | 120       | 0     | 0        |      |

|            |           |                |           |             |                                  |          |           |      |          |      |
|------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID  | MB-18710  | SampType:      | MBLK      | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID: | PBS       | Batch ID:      | 18710     | RunNo:      | 25555                            |          |           |      |          |      |
| Prep Date: | 4/15/2015 | Analysis Date: | 4/16/2015 | SeqNo:      | 757273                           | Units:   | %REC      |      |          |      |
| Analyte    | Result    | PQL            | SPK value | SPK Ref Val | %REC                             | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB  | 930       |                | 1000      |             | 93.2                             | 80       | 120       |      |          |      |

|            |           |                |           |             |                                  |          |           |      |          |      |
|------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID  | LCS-18710 | SampType:      | LCS       | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID: | LCSS      | Batch ID:      | 18710     | RunNo:      | 25555                            |          |           |      |          |      |
| Prep Date: | 4/15/2015 | Analysis Date: | 4/16/2015 | SeqNo:      | 757274                           | Units:   | %REC      |      |          |      |
| Analyte    | Result    | PQL            | SPK value | SPK Ref Val | %REC                             | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB  | 960       |                | 1000      |             | 95.8                             | 80       | 120       |      |          |      |

### Qualifiers:

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

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1504587

17-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|                            |           |                          |           |             |                                       |          |              |      |          |      |
|----------------------------|-----------|--------------------------|-----------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                  | MB-18677  | SampType: MBLK           |           |             | TestCode: EPA Method 8021B: Volatiles |          |              |      |          |      |
| Client ID:                 | PBS       | Batch ID: 18677          |           |             | RunNo: 25529                          |          |              |      |          |      |
| Prep Date:                 | 4/14/2015 | Analysis Date: 4/15/2015 |           |             | SeqNo: 756558                         |          | 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     |             | 98.7                                  | 80       | 120          |      |          |      |

|                            |           |                          |           |             |                                       |          |              |      |          |      |
|----------------------------|-----------|--------------------------|-----------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                  | LCS-18677 | SampType: LCS            |           |             | TestCode: EPA Method 8021B: Volatiles |          |              |      |          |      |
| Client ID:                 | LCSS      | Batch ID: 18677          |           |             | RunNo: 25529                          |          |              |      |          |      |
| Prep Date:                 | 4/14/2015 | Analysis Date: 4/15/2015 |           |             | SeqNo: 756559                         |          | 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           | 109                                   | 76.6     | 128          |      |          |      |
| Toluene                    | 1.0       | 0.050                    | 1.000     | 0           | 102                                   | 75       | 124          |      |          |      |
| Ethylbenzene               | 1.1       | 0.050                    | 1.000     | 0           | 107                                   | 79.5     | 126          |      |          |      |
| Xylenes, Total             | 3.2       | 0.10                     | 3.000     | 0           | 107                                   | 78.8     | 124          |      |          |      |
| Surr: 4-Bromofluorobenzene | 1.0       |                          | 1.000     |             | 104                                   | 80       | 120          |      |          |      |

|                            |                      |                |           |             |           |                             |           |       |          |      |
|----------------------------|----------------------|----------------|-----------|-------------|-----------|-----------------------------|-----------|-------|----------|------|
| Sample ID                  | 1504587-002AMS       | SampType:      | MS        |             | TestCode: | EPA Method 8021B: Volatiles |           |       |          |      |
| Client ID:                 | South Wall 3-pt 5'-1 | Batch ID:      | 18677     |             | RunNo:    | 25529                       |           |       |          |      |
| Prep Date:                 | 4/14/2015            | Analysis Date: | 4/15/2015 |             | SeqNo:    | 756581                      | Units:    | mg/Kg |          |      |
| Analyte                    | Result               | PQL            | SPK value | SPK Ref Val | %REC      | LowLimit                    | HighLimit | %RPD  | RPDLimit | Qual |
| Benzene                    | 0.95                 | 0.24           | 0.9452    | 0           | 100       | 69.2                        | 126       |       |          |      |
| Toluene                    | 1.2                  | 0.24           | 0.9452    | 0.1609      | 110       | 65.6                        | 128       |       |          |      |
| Ethylbenzene               | 1.7                  | 0.24           | 0.9452    | 0.4592      | 129       | 65.5                        | 138       |       |          |      |
| Xylenes, Total             | 14                   | 0.47           | 2.836     | 8.554       | 183       | 63                          | 139       |       |          | S    |
| Surr: 4-Bromofluorobenzene | 5.4                  |                | 4.726     |             | 114       | 80                          | 120       |       |          |      |

|                            |                      |      |                          |             |                                       |          |              |      |          |      |
|----------------------------|----------------------|------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                  | 1504587-002AMSD      |      | SampType: MSD            |             | TestCode: EPA Method 8021B: Volatiles |          |              |      |          |      |
| Client ID:                 | South Wall 3-pt 5'-1 |      | Batch ID: 18677          |             | RunNo: 25529                          |          |              |      |          |      |
| Prep Date:                 | 4/14/2015            |      | Analysis Date: 4/15/2015 |             | SeqNo: 756582                         |          | Units: mg/Kg |      |          |      |
| Analyte                    | Result               | PQL  | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Benzene                    | 0.86                 | 0.24 | 0.9470                   | 0           | 91.3                                  | 69.2     | 126          | 8.92 | 18.5     |      |
| Toluene                    | 1.1                  | 0.24 | 0.9470                   | 0.1609      | 102                                   | 65.6     | 128          | 6.45 | 20.6     |      |
| Ethylbenzene               | 1.6                  | 0.24 | 0.9470                   | 0.4592      | 124                                   | 65.5     | 138          | 2.77 | 20.1     |      |
| Xylenes, Total             | 14                   | 0.47 | 2.841                    | 8.554       | 207                                   | 63       | 139          | 4.98 | 21.1     | S    |
| Surr: 4-Bromofluorobenzene | 5.6                  |      | 4.735                    |             | 118                                   | 80       | 120          | 0    | 0        |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1504587

17-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|                            |           |     |                          |             |                                       |          |             |      |          |      |
|----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | MB-18710  |     | SampType: MBLK           |             | TestCode: EPA Method 8021B: Volatiles |          |             |      |          |      |
| Client ID:                 | PBS       |     | Batch ID: 18710          |             | RunNo: 25555                          |          |             |      |          |      |
| Prep Date:                 | 4/15/2015 |     | Analysis Date: 4/16/2015 |             | SeqNo: 757283                         |          | Units: %REC |      |          |      |
| Analyte                    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 0.92      |     | 1.000                    |             | 92.4                                  | 80       | 120         |      |          |      |

|                            |           |     |                          |             |                                       |          |             |      |          |      |
|----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | LCS-18710 |     | SampType: LCS            |             | TestCode: EPA Method 8021B: Volatiles |          |             |      |          |      |
| Client ID:                 | LCSS      |     | Batch ID: 18710          |             | RunNo: 25555                          |          |             |      |          |      |
| Prep Date:                 | 4/15/2015 |     | Analysis Date: 4/16/2015 |             | SeqNo: 757284                         |          | Units: %REC |      |          |      |
| Analyte                    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| 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  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

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





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: **1504587**

RcptNo: **1**

Received by/date:

Logged By: **Lindsay Mangin**

**4/14/15**  
4/14/2015 7:10:00 AM

Completed By: **Lindsay Mangin**

4/14/2015 7:21:09 AM

Reviewed By: **NB**

**4/14/15**

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

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

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

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_


17. Additional remarks:

### 18. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1         | 1.8                     | Good      | Yes         |         |           |           |

| Chain-of-Custody Record                      |  | Turn-Around Time:   | SAME DAY                                 |
|--|--|---|--|
| Client:                                      | BP AMERICA   | <input type="checkbox"/> Standard   | <input checked="" type="checkbox"/> Rush |
|  | BLAGG  | Project Name:   |  |
| Mailing Address:                             | P.O. Box 97  | STEWART LS 8  |  |
|  | Bloomfield NM 87413                                | Project #:  |  |
| Phone #:                                     | 5053201193   | Project Manager:  |  |
| email or Fax#:                               |  | J. Blagg  |  |
| QA/QC Package:                               |  |   |  |
| <input checked="" type="checkbox"/> Standard | <input type="checkbox"/> Level 4 (Full Validation) |   |  |
| Accreditation                                |  | Sampler: J. Blagg   |  |
| <input type="checkbox"/> NELAP               | <input type="checkbox"/> Other                     | On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |  |
| <input type="checkbox"/> EDD (Type)          |  | Sample Temperature: 1.8   |  |

[illegible]

|                 |               |                                |   |                   |              |
|-----------------|---------------|--------------------------------|---|-------------------|--------------|
| Date:<br>1/3/15 | Time:<br>1600 | Relinquished by:<br>Jill Blegg | Received by:<br> | Date:<br>04/14/15 | Time:<br>071 |
| Date:           | Time:         | Relinquished by:               | Received by:  | Date:             | Time:        |

Sample Temperature: 1,8

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

|  |   |   |   |  |
|--|---|---|---|--|
|  | X | X | X | BTEX + <del>MTBE</del> MB's (8021)         |
|  |   |   |   | BTEX + MTBE + TPH (Gas only)               |
|  | X | X | X | TPH 8015B (GRO / DRO / <del>MBCO</del> )   |
|  |   |   |   | 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)                            |
|  | X | X | X | CHLORIDE                                   |
|  |   |   |   |  |
|  |   |   |   |  |
|  |   |   |   | Air Bubbles (Y or N)                       |

Remarks: BILL BP  
CONTACT: JEFF PEACE  
PARKER: ZEVHOIREME

## Analytical Report

Lab Order 1504847

Date Reported: 4/23/2015

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: West Wall 3-pt 5'-15'

Project: Stewart LS 8

Collection Date: 4/20/2015 8:30:00 AM

Lab ID: 1504847-001

Matrix: MEOH (SOIL)

Received Date: 4/21/2015 7:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch               |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                       | Analyst: <b>JME</b> |
| Diesel Range Organics (DRO)                    | ND     | 10       |      | mg/Kg | 1  | 4/21/2015 10:32:14 AM | 18792               |
| Surr: DNOP                                     | 80.9   | 57.9-140 |      | %REC  | 1  | 4/21/2015 10:32:14 AM | 18792               |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)                  | ND     | 4.7      |      | mg/Kg | 1  | 4/21/2015 10:38:26 AM | 18764               |
| Surr: BFB                                      | 87.9   | 80-120   |      | %REC  | 1  | 4/21/2015 10:38:26 AM | 18764               |
| <b>EPA METHOD 8021B: VOLATILES</b>             |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Benzene  | ND     | 0.047    |      | mg/Kg | 1  | 4/21/2015 10:38:26 AM | 18764               |
| Toluene  | ND     | 0.047    |      | mg/Kg | 1  | 4/21/2015 10:38:26 AM | 18764               |
| Ethylbenzene                                   | ND     | 0.047    |      | mg/Kg | 1  | 4/21/2015 10:38:26 AM | 18764               |
| Xylenes, Total                                 | ND     | 0.093    |      | mg/Kg | 1  | 4/21/2015 10:38:26 AM | 18764               |
| Surr: 4-Bromofluorobenzene                     | 97.8   | 80-120   |      | %REC  | 1  | 4/21/2015 10:38:26 AM | 18764               |
| <b>EPA METHOD 300.0: ANIONS</b>                |        |          |      |       |    |                       | Analyst: <b>JRR</b> |
| Chloride                                       | ND     | 30       |      | mg/Kg | 20 | 4/21/2015 10:51:53 AM | 18796               |

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

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



# Analytical Report

Lab Order **1504847**

Date Reported: **4/23/2015**

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

**Client Sample ID:** South Wall 3-pt 5'-15'

**Project:** Stewart LS 8

**Collection Date:** 4/20/2015 8:35:00 AM

**Lab ID:** 1504847-002

**Matrix:** MEOH (SOIL)

**Received Date:** 4/21/2015 7:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch               |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                       | Analyst: <b>JME</b> |
| Diesel Range Organics (DRO)                    | ND     | 9.9      |      | mg/Kg | 1  | 4/21/2015 10:53:31 AM | 18792               |
| Surr: DNOP                                     | 88.7   | 57.9-140 |      | %REC  | 1  | 4/21/2015 10:53:31 AM | 18792               |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)                  | ND     | 3.9      |      | mg/Kg | 1  | 4/21/2015 11:07:08 AM | 18764               |
| Surr: BFB                                      | 86.9   | 80-120   |      | %REC  | 1  | 4/21/2015 11:07:08 AM | 18764               |
| <b>EPA METHOD 8021B: VOLATILES</b>             |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Benzene  | ND     | 0.039    |      | mg/Kg | 1  | 4/21/2015 11:07:08 AM | 18764               |
| Toluene  | ND     | 0.039    |      | mg/Kg | 1  | 4/21/2015 11:07:08 AM | 18764               |
| Ethylbenzene                                   | ND     | 0.039    |      | mg/Kg | 1  | 4/21/2015 11:07:08 AM | 18764               |
| Xylenes, Total                                 | ND     | 0.077    |      | mg/Kg | 1  | 4/21/2015 11:07:08 AM | 18764               |
| Surr: 4-Bromofluorobenzene                     | 95.6   | 80-120   |      | %REC  | 1  | 4/21/2015 11:07:08 AM | 18764               |
| <b>EPA METHOD 300.0: ANIONS</b>                |        |          |      |       |    |                       | Analyst: <b>JRR</b> |
| Chloride                                       | ND     | 30       |      | mg/Kg | 20 | 4/21/2015 11:04:17 AM | 18796               |

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

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

## Analytical Report

Lab Order 1504847

Date Reported: 4/23/2015

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Wall 3-pt 5'-15'

Project: Stewart LS 8

Collection Date: 4/20/2015 8:40:00 AM

Lab ID: 1504847-003

Matrix: MEOH (SOIL)

Received Date: 4/21/2015 7:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch        |
|--|--------|----------|------|-------|----|-----------------------|--------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                       | Analyst: JME |
| Diesel Range Organics (DRO)                    | ND     | 10       |      | mg/Kg | 1  | 4/21/2015 11:14:59 AM | 18792        |
| Surr: DNOP                                     | 89.1   | 57.9-140 |      | %REC  | 1  | 4/21/2015 11:14:59 AM | 18792        |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |       |    |                       | Analyst: NSB |
| Gasoline Range Organics (GRO)                  | ND     | 4.2      |      | mg/Kg | 1  | 4/21/2015 11:35:56 AM | 18764        |
| Surr: BFB                                      | 87.5   | 80-120   |      | %REC  | 1  | 4/21/2015 11:35:56 AM | 18764        |
| <b>EPA METHOD 8021B: VOLATILES</b>             |        |          |      |       |    |                       | Analyst: NSB |
| Benzene  | ND     | 0.042    |      | mg/Kg | 1  | 4/21/2015 11:35:56 AM | 18764        |
| Toluene  | ND     | 0.042    |      | mg/Kg | 1  | 4/21/2015 11:35:56 AM | 18764        |
| Ethylbenzene                                   | ND     | 0.042    |      | mg/Kg | 1  | 4/21/2015 11:35:56 AM | 18764        |
| Xylenes, Total                                 | ND     | 0.085    |      | mg/Kg | 1  | 4/21/2015 11:35:56 AM | 18764        |
| Surr: 4-Bromofluorobenzene                     | 96.3   | 80-120   |      | %REC  | 1  | 4/21/2015 11:35:56 AM | 18764        |
| <b>EPA METHOD 300.0: ANIONS</b>                |        |          |      |       |    |                       | Analyst: JRR |
| Chloride                                       | ND     | 30       |      | mg/Kg | 20 | 4/21/2015 11:16:42 AM | 18796        |

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

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



## Analytical Report

Lab Order 1504847

Date Reported: 4/23/2015

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: South Base 3-pt @ 21'

Project: Stewart LS 8

Collection Date: 4/20/2015 8:45:00 AM

Lab ID: 1504847-004

Matrix: MEOH (SOIL)

Received Date: 4/21/2015 7:30:00 AM

| Analyses                                       | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch        |
|--|--------|----------|------|-------|----|-----------------------|--------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                       | Analyst: JME |
| Diesel Range Organics (DRO)                    | ND     | 10       |      | mg/Kg | 1  | 4/21/2015 11:36:26 AM | 18792        |
| Surr: DNOP                                     | 86.2   | 57.9-140 |      | %REC  | 1  | 4/21/2015 11:36:26 AM | 18792        |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |       |    |                       | Analyst: NSB |
| Gasoline Range Organics (GRO)                  | 6.0    | 3.9      |      | mg/Kg | 1  | 4/21/2015 10:09:44 AM | 18764        |
| Surr: BFB                                      | 123    | 80-120   | S    | %REC  | 1  | 4/21/2015 10:09:44 AM | 18764        |
| <b>EPA METHOD 8021B: VOLATILES</b>             |        |          |      |       |    |                       | Analyst: NSB |
| Benzene  | ND     | 0.039    |      | mg/Kg | 1  | 4/21/2015 10:09:44 AM | 18764        |
| Toluene  | ND     | 0.039    |      | mg/Kg | 1  | 4/21/2015 10:09:44 AM | 18764        |
| Ethylbenzene                                   | ND     | 0.039    |      | mg/Kg | 1  | 4/21/2015 10:09:44 AM | 18764        |
| Xylenes, Total                                 | 0.081  | 0.078    |      | mg/Kg | 1  | 4/21/2015 10:09:44 AM | 18764        |
| Surr: 4-Bromofluorobenzene                     | 105    | 80-120   |      | %REC  | 1  | 4/21/2015 10:09:44 AM | 18764        |
| <b>EPA METHOD 300.0: ANIONS</b>                |        |          |      |       |    |                       | Analyst: JRR |
| Chloride                                       | ND     | 30       |      | mg/Kg | 20 | 4/21/2015 11:29:07 AM | 18796        |

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

|             |   |   |    |  |
|-------------|---|---|----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH Not In Range                             |
|             | 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#: 1504847

23-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|            |           |     |                |             |      |           |                          |      |              |      |  |
|------------|-----------|-----|----------------|-------------|------|-----------|--------------------------|------|--------------|------|--|
| Sample ID  | LCS-18796 |     | SampType:      | LCS         |      | TestCode: | EPA Method 300.0: Anions |      |              |      |  |
| Client ID: | LCSS      |     | Batch ID:      | 18796       |      | RunNo:    | 25659                    |      |              |      |  |
| Prep Date: | 4/21/2015 |     | Analysis Date: | 4/21/2015   |      | SeqNo:    | 760450                   |      | Units: mg/Kg |      |  |
| Analyte    | Result    | PQL | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                | %RPD | RPDLimit     | Qual |  |
| Chloride   | 14        | 1.5 | 15.00          | 0           | 92.4 | 90        | 110                      |      |              |      |  |

### Qualifiers:

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

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1504847

23-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|                             |           |     |                          |             |   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID                   | MB-18792  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | PBS       |     | Batch ID: 18792          |             | RunNo: 25632                                      |          |              |      |          |      |
| Prep Date:                  | 4/21/2015 |     | Analysis Date: 4/21/2015 |             | SeqNo: 759849                                     |          | 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                  | 8.5       |     | 10.00                    |             | 84.8  | 57.9     | 140          |      |          |      |

|                             |           |     |                          |             |   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID                   | LCS-18792 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 18792          |             | RunNo: 25632                                      |          |              |      |          |      |
| Prep Date:                  | 4/21/2015 |     | Analysis Date: 4/21/2015 |             | SeqNo: 759851                                     |          | 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           | 93.3  | 67.8     | 130          |      |          |      |
| Surr: DNOP                  | 4.7       |     | 5.000                    |             | 94.5  | 57.9     | 140          |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1504847

23-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|                               |           |                |           |             |           |                                  |           |              |          |      |
|-------------------------------|-----------|----------------|-----------|-------------|-----------|----------------------------------|-----------|--------------|----------|------|
| Sample ID                     | MB-18764  | SampType:      | MBLK      |             | TestCode: | EPA Method 8015D: Gasoline Range |           |              |          |      |
| Client ID:                    | PBS       | Batch ID:      | 18764     |             | RunNo:    | 25643                            |           |              |          |      |
| Prep Date:                    | 4/20/2015 | Analysis Date: | 4/21/2015 |             | SeqNo:    | 760143                           |           | Units: mg/Kg |          |      |
| Analyte                       | Result    | PQL            | SPK value | SPK Ref Val | %REC      | LowLimit                         | HighLimit | %RPD         | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND        | 5.0            |           |             |           |                                  |           |              |          |      |
| Surr: BFB                     | 870       |                | 1000      |             | 86.9      | 80                               | 120       |              |          |      |

|                               |           |     |                          |             |  |          |              |      |          |      |
|-------------------------------|-----------|-----|--------------------------|-------------|--|----------|--------------|------|----------|------|
| Sample ID                     | LCS-18764 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |              |      |          |      |
| Client ID:                    | LCSS      |     | Batch ID: 18764          |             | RunNo: 25643                               |          |              |      |          |      |
| Prep Date:                    | 4/20/2015 |     | Analysis Date: 4/21/2015 |             | SeqNo: 760144                              |          | Units: mg/Kg |      |          |      |
| Analyte                       | Result    | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26        | 5.0 | 25.00                    | 0           | 105  | 64       | 130          |      |          |      |
| Surr: BFB                     | 990       |     | 1000                     |             | 98.9                                       | 80       | 120          |      |          |      |

|            |           |                          |           |             |  |          |             |      |          |      |
|------------|-----------|--------------------------|-----------|-------------|--|----------|-------------|------|----------|------|
| Sample ID  | MB-18803  | SampType: MBLK           |           |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID: | PBS       | Batch ID: 18803          |           |             | RunNo: 25665                               |          |             |      |          |      |
| Prep Date: | 4/21/2015 | Analysis Date: 4/22/2015 |           |             | SeqNo: 761162                              |          | Units: %REC |      |          |      |
| Analyte    | Result    | PQL                      | SPK value | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: BFB  | 850       |                          | 1000      |             | 85.0                                       | 80       | 120         |      |          |      |

|            |           |     |                          |             |  |          |             |      |          |      |
|------------|-----------|-----|--------------------------|-------------|--|----------|-------------|------|----------|------|
| Sample ID  | LCS-18803 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Gasoline Range |          |             |      |          |      |
| Client ID: | LCSS      |     | Batch ID: 18803          |             | RunNo: 25665                               |          |             |      |          |      |
| Prep Date: | 4/21/2015 |     | Analysis Date: 4/22/2015 |             | SeqNo: 761163                              |          | Units: %REC |      |          |      |
| Analyte    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                       | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: BFB  | 940       |     | 1000                     |             | 94.4                                       | 80       | 120         |      |          |      |

### Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH Not In Range                             |
| 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#: 1504847

23-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|                            |                  |       |                |                  |      |           |                                    |      |                     |      |
|----------------------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID                  | <b>MB-18764</b>  |       | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8021B: Volatiles</b> |      |                     |      |
| Client ID:                 | <b>PBS</b>       |       | Batch ID:      | <b>18764</b>     |      | RunNo:    | <b>25643</b>                       |      |                     |      |
| Prep Date:                 | <b>4/20/2015</b> |       | Analysis Date: | <b>4/21/2015</b> |      | SeqNo:    | <b>760213</b>                      |      | Units: <b>mg/Kg</b> |      |
| 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 | 0.97             |       | 1.000          |                  | 97.1 | 80        | 120                                |      |                     |      |

|                            |                  |       |                |                  |      |           |                                    |      |                     |      |
|----------------------------|------------------|-------|----------------|------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID                  | <b>LCS-18764</b> |       | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8021B: Volatiles</b> |      |                     |      |
| Client ID:                 | <b>LCSS</b>      |       | Batch ID:      | <b>18764</b>     |      | RunNo:    | <b>25643</b>                       |      |                     |      |
| Prep Date:                 | <b>4/20/2015</b> |       | Analysis Date: | <b>4/21/2015</b> |      | SeqNo:    | <b>760214</b>                      |      | Units: <b>mg/Kg</b> |      |
| Analyte                    | Result           | PQL   | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit            | Qual |
| Benzene                    | 1.1              | 0.050 | 1.000          | 0                | 110  | 76.6      | 128                                |      |                     |      |
| Toluene                    | 1.0              | 0.050 | 1.000          | 0                | 105  | 75        | 124                                |      |                     |      |
| Ethylbenzene               | 1.1              | 0.050 | 1.000          | 0                | 110  | 79.5      | 126                                |      |                     |      |
| Xylenes, Total             | 3.3              | 0.10  | 3.000          | 0                | 109  | 78.8      | 124                                |      |                     |      |
| Surr: 4-Bromofluorobenzene | 1.1              |       | 1.000          |                  | 107  | 80        | 120                                |      |                     |      |

|                            |                  |     |                |                  |      |           |                                    |      |                    |      |
|----------------------------|------------------|-----|----------------|------------------|------|-----------|------------------------------------|------|--------------------|------|
| Sample ID                  | <b>MB-18803</b>  |     | SampType:      | <b>MBLK</b>      |      | TestCode: | <b>EPA Method 8021B: Volatiles</b> |      |                    |      |
| Client ID:                 | <b>PBS</b>       |     | Batch ID:      | <b>18803</b>     |      | RunNo:    | <b>25665</b>                       |      |                    |      |
| Prep Date:                 | <b>4/21/2015</b> |     | Analysis Date: | <b>4/22/2015</b> |      | SeqNo:    | <b>761191</b>                      |      | Units: <b>%REC</b> |      |
| Analyte                    | Result           | PQL | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit           | Qual |
| Surr: 4-Bromofluorobenzene | 0.92             |     | 1.000          |                  | 92.1 | 80        | 120                                |      |                    |      |

|                            |                  |     |                |                  |      |           |                                    |      |                    |      |
|----------------------------|------------------|-----|----------------|------------------|------|-----------|------------------------------------|------|--------------------|------|
| Sample ID                  | <b>LCS-18803</b> |     | SampType:      | <b>LCS</b>       |      | TestCode: | <b>EPA Method 8021B: Volatiles</b> |      |                    |      |
| Client ID:                 | <b>LCSS</b>      |     | Batch ID:      | <b>18803</b>     |      | RunNo:    | <b>25665</b>                       |      |                    |      |
| Prep Date:                 | <b>4/21/2015</b> |     | Analysis Date: | <b>4/22/2015</b> |      | SeqNo:    | <b>761192</b>                      |      | Units: <b>%REC</b> |      |
| Analyte                    | Result           | PQL | SPK value      | SPK Ref Val      | %REC | LowLimit  | HighLimit                          | %RPD | RPDLimit           | Qual |
| Surr: 4-Bromofluorobenzene | 1.0              |     | 1.000          |                  | 100  | 80        | 120                                |      |                    |      |

### Qualifiers:

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

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



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: **1504847**

RcptNo: 1

Received by/date:

*[Signature]* 04/21/15

Logged By: **Lindsay Mangin**

4/21/2015 7:30:00 AM

*[Signature]*

Completed By: **Lindsay Mangin**

4/21/2015 8:08:10 AM

*[Signature]*

Reviewed By:

*[Signature]*

### Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Courier

### Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☐

No ☐

No VOA Vials ☒

11. Were any sample containers received broken?

Yes ☐

No ☒

12. Does paperwork match bottle labels?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

Yes ☒

No ☐

(If no, notify customer for authorization.)

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

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

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

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_


17. Additional remarks:

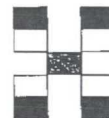
### 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 3.3     | Good      | Yes         |         |           |           |

| Chain-of-Custody Record   |   | Turn-Around Time: <u>SAME DAY</u> |  |
|---|---|-----------------------------------|--|
| Client: <u>BP America</u>   | <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush  |                                   |  |
| <u>BLAGG Engr.</u>  | Project Name:   | <u>STEWART LS 8</u>               |  |
| Mailing Address: <u>P.O. Box 87</u>   | Project #:  |                                   |  |
| <u>Bloomfield NM 87413</u>  | Project Manager:  | <u>J. Blagg</u>                   |  |
| Phone #: <u>505-320-1183</u>  | Sampler: <u>J. Blagg</u>  |                                   |  |
| email or Fax#:  | On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |                                   |  |
| QA/QC Package:  | Sample Temperature: <u>3.2</u>  |                                   |  |
| <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation) |   |                                   |  |
| Accreditation   |   |                                   |  |
| <input type="checkbox"/> NELAP <input type="checkbox"/> Other _____                             |   |                                   |  |
| <input type="checkbox"/> EDD (Type) _____   |   |                                   |  |

[illegible]

|         |       |                  |   |         |      |
|---------|-------|------------------|---|---------|------|
| Date:   | Time: | Relinquished by: | Received by:  | Date    | Time |
| 4/20/15 | 1637  | Jill Blegg       | Christine Waeter  | 4/20/15 | 1637 |
| Date:   | Time: | Relinquished by: | Received by:  | Date    | Time |
| 4/20/15 | 1841  | Christine Waeter |  | 4/20/15 | 0737 |



[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

|  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | X | X | X | X | BTEX + <del>MtBE</del> + <del>MBEs</del> (8021) |
|  |   |   |   |   | BTEX + MTBE + TPH (Gas only)                    |
|  | X | X | X | X | TPH 8015B (GRO / DRO / <del>MTBE</del> )        |
|  |   |   |   |   | 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)                                 |
|  | X | X | X | X | <i>Chloride</i>                                 |
|  |   |   |   |   |   |
|  |   |   |   |   |   |
|  |   |   |   |   |   |
|  |   |   |   |   | Air Bubbles (Y or N)                            |

Remarks: Bill BP  
CONTACT: JEFF PEACE  
PARKEY: ~~JEFF PEACE~~  
ZEVH OIREME



## Analytical Report

Lab Order 1504929

Date Reported: 4/23/2015

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: N Wall W 3-pt 5'-15'

Project: Stewart LS 8

Collection Date: 4/21/2015 12:20:00 PM

Lab ID: 1504929-001

Matrix: SOIL

Received Date: 4/22/2015 8:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch        |
|--|--------|----------|------|-------|----|-----------------------|--------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                       | Analyst: JME |
| Diesel Range Organics (DRO)                    | ND     | 10       |      | mg/Kg | 1  | 4/22/2015 10:08:08 AM | 18826        |
| Surr: DNOP                                     | 84.7   | 57.9-140 |      | %REC  | 1  | 4/22/2015 10:08:08 AM | 18826        |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |       |    |                       | Analyst: NSB |
| Gasoline Range Organics (GRO)                  | ND     | 3.9      |      | mg/Kg | 1  | 4/22/2015 9:20:58 AM  | R25665       |
| Surr: BFB                                      | 86.6   | 80-120   |      | %REC  | 1  | 4/22/2015 9:20:58 AM  | R25665       |
| <b>EPA METHOD 8021B: VOLATILES</b>             |        |          |      |       |    |                       | Analyst: NSB |
| Benzene  | ND     | 0.039    |      | mg/Kg | 1  | 4/22/2015 9:20:58 AM  | R25665       |
| Toluene  | ND     | 0.039    |      | mg/Kg | 1  | 4/22/2015 9:20:58 AM  | R25665       |
| Ethylbenzene                                   | ND     | 0.039    |      | mg/Kg | 1  | 4/22/2015 9:20:58 AM  | R25665       |
| Xylenes, Total                                 | ND     | 0.077    |      | mg/Kg | 1  | 4/22/2015 9:20:58 AM  | R25665       |
| Surr: 4-Bromofluorobenzene                     | 95.3   | 80-120   |      | %REC  | 1  | 4/22/2015 9:20:58 AM  | R25665       |
| <b>EPA METHOD 300.0: ANIONS</b>                |        |          |      |       |    |                       | Analyst: LGT |
| Chloride                                       | ND     | 30       |      | mg/Kg | 20 | 4/22/2015 10:54:42 AM | 18827        |

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

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

## Analytical Report

Lab Order 1504929

Date Reported: 4/23/2015

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: N Wall E 3-pt 5'-15'

Project: Stewart LS 8

Collection Date: 4/21/2015 12:25:00 PM

Lab ID: 1504929-002

Matrix: SOIL

Received Date: 4/22/2015 8:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch        |
|--|--------|----------|------|-------|----|-----------------------|--------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                       | Analyst: JME |
| Diesel Range Organics (DRO)                    | ND     | 9.9      |      | mg/Kg | 1  | 4/22/2015 10:35:05 AM | 18826        |
| Surr: DNOP                                     | 86.5   | 57.9-140 |      | %REC  | 1  | 4/22/2015 10:35:05 AM | 18826        |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |       |    |                       | Analyst: NSB |
| Gasoline Range Organics (GRO)                  | ND     | 3.8      |      | mg/Kg | 1  | 4/22/2015 9:49:41 AM  | R25665       |
| Surr: BFB                                      | 85.9   | 80-120   |      | %REC  | 1  | 4/22/2015 9:49:41 AM  | R25665       |
| <b>EPA METHOD 8021B: VOLATILES</b>             |        |          |      |       |    |                       | Analyst: NSB |
| Benzene  | ND     | 0.038    |      | mg/Kg | 1  | 4/22/2015 9:49:41 AM  | R25665       |
| Toluene  | ND     | 0.038    |      | mg/Kg | 1  | 4/22/2015 9:49:41 AM  | R25665       |
| Ethylbenzene                                   | ND     | 0.038    |      | mg/Kg | 1  | 4/22/2015 9:49:41 AM  | R25665       |
| Xylenes, Total                                 | ND     | 0.076    |      | mg/Kg | 1  | 4/22/2015 9:49:41 AM  | R25665       |
| Surr: 4-Bromofluorobenzene                     | 93.6   | 80-120   |      | %REC  | 1  | 4/22/2015 9:49:41 AM  | R25665       |
| <b>EPA METHOD 300.0: ANIONS</b>                |        |          |      |       |    |                       | Analyst: LGT |
| Chloride                                       | ND     | 30       |      | mg/Kg | 20 | 4/22/2015 11:07:06 AM | 18827        |

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

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

# Analytical Report

Lab Order 1504929

Date Reported: 4/23/2015

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Project: Stewart LS 8

Lab ID: 1504929-003

Client Sample ID: E Wall N 3-pt 5'-15'

Collection Date: 4/21/2015 12:30:00 PM

Received Date: 4/22/2015 8:00:00 AM

Matrix: SOIL

| Analyses                                       | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch               |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                       | Analyst: <b>JME</b> |
| Diesel Range Organics (DRO)                    | ND     | 9.8      |      | mg/Kg | 1  | 4/22/2015 11:02:08 AM | 18826               |
| Surr: DNOP                                     | 84.8   | 57.9-140 |      | %REC  | 1  | 4/22/2015 11:02:08 AM | 18826               |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)                  | ND     | 4.1      |      | mg/Kg | 1  | 4/22/2015 10:18:25 AM | R25665              |
| Surr: BFB                                      | 85.9   | 80-120   |      | %REC  | 1  | 4/22/2015 10:18:25 AM | R25665              |
| <b>EPA METHOD 8021B: VOLATILES</b>             |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Benzene  | ND     | 0.041    |      | mg/Kg | 1  | 4/22/2015 10:18:25 AM | R25665              |
| Toluene  | ND     | 0.041    |      | mg/Kg | 1  | 4/22/2015 10:18:25 AM | R25665              |
| Ethylbenzene                                   | ND     | 0.041    |      | mg/Kg | 1  | 4/22/2015 10:18:25 AM | R25665              |
| Xylenes, Total                                 | ND     | 0.082    |      | mg/Kg | 1  | 4/22/2015 10:18:25 AM | R25665              |
| Surr: 4-Bromofluorobenzene                     | 93.1   | 80-120   |      | %REC  | 1  | 4/22/2015 10:18:25 AM | R25665              |
| <b>EPA METHOD 300.0: ANIONS</b>                |        |          |      |       |    |                       | Analyst: <b>LGT</b> |
| Chloride                                       | ND     | 30       |      | mg/Kg | 20 | 4/22/2015 11:19:31 AM | 18827               |

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

|             |   |   |    |  |             |
|-------------|---|---|----|--|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    | Page 3 of 8 |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |             |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |             |
|             | O | RSD is greater than RSDlimit                    | P  | Sample pH Not In Range                             |             |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |             |
|             | S | Spike Recovery outside accepted recovery limits |    |  |             |



**Analytical Report**

Lab Order 1504929

Date Reported: 4/23/2015

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Project:** Stewart LS 8**Lab ID:** 1504929-004**Matrix:** SOIL**Client Sample ID:** Base 3-pt @ 20' NE Area**Collection Date:** 4/21/2015 12:35:00 PM**Received Date:** 4/22/2015 8:00:00 AM

| Analyses                                       | Result | RL       | Qual | Units | DF | Date Analyzed         | Batch               |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| <b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                       | Analyst: <b>JME</b> |
| Diesel Range Organics (DRO)                    | ND     | 10       |      | mg/Kg | 1  | 4/22/2015 11:29:12 AM | 18826               |
| Surr: DNOP                                     | 89.6   | 57.9-140 |      | %REC  | 1  | 4/22/2015 11:29:12 AM | 18826               |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>        |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)                  | ND     | 4.2      |      | mg/Kg | 1  | 4/22/2015 10:47:06 AM | R25665              |
| Surr: BFB                                      | 87.4   | 80-120   |      | %REC  | 1  | 4/22/2015 10:47:06 AM | R25665              |
| <b>EPA METHOD 8021B: VOLATILES</b>             |        |          |      |       |    |                       | Analyst: <b>NSB</b> |
| Benzene  | ND     | 0.042    |      | mg/Kg | 1  | 4/22/2015 10:47:06 AM | R25665              |
| Toluene  | ND     | 0.042    |      | mg/Kg | 1  | 4/22/2015 10:47:06 AM | R25665              |
| Ethylbenzene                                   | ND     | 0.042    |      | mg/Kg | 1  | 4/22/2015 10:47:06 AM | R25665              |
| Xylenes, Total                                 | ND     | 0.084    |      | mg/Kg | 1  | 4/22/2015 10:47:06 AM | R25665              |
| Surr: 4-Bromofluorobenzene                     | 94.9   | 80-120   |      | %REC  | 1  | 4/22/2015 10:47:06 AM | R25665              |
| <b>EPA METHOD 300.0: ANIONS</b>                |        |          |      |       |    |                       | Analyst: <b>LGT</b> |
| Chloride                                       | ND     | 30       |      | mg/Kg | 20 | 4/22/2015 11:31:55 AM | 18827               |

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

|                    |   |   |    |  |
|--------------------|---|---|----|--|
| <b>Qualifiers:</b> | * | Value exceeds Maximum Contaminant Level.        | B  | Analyte detected in the associated Method Blank    |
|                    | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|                    | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|                    | O | RSD is greater than RSDlimit                    | P  | Sample pH Not In Range                             |
|                    | 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#: 1504929

23-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|            |           |     |                |             |      |           |                          |      |              |      |  |
|------------|-----------|-----|----------------|-------------|------|-----------|--------------------------|------|--------------|------|--|
| Sample ID  | MB-18827  |     | SampType:      | MBLK        |      | TestCode: | EPA Method 300.0: Anions |      |              |      |  |
| Client ID: | PBS       |     | Batch ID:      | 18827       |      | RunNo:    | 25690                    |      |              |      |  |
| Prep Date: | 4/22/2015 |     | Analysis Date: | 4/22/2015   |      | SeqNo:    | 761434                   |      | Units: mg/Kg |      |  |
| Analyte    | Result    | PQL | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                | %RPD | RPDLimit     | Qual |  |
| Chloride   | ND        | 1.5 |                |             |      |           |                          |      |              |      |  |

|            |           |     |                |             |      |           |                          |      |              |      |  |
|------------|-----------|-----|----------------|-------------|------|-----------|--------------------------|------|--------------|------|--|
| Sample ID  | LCS-18827 |     | SampType:      | LCS         |      | TestCode: | EPA Method 300.0: Anions |      |              |      |  |
| Client ID: | LCSS      |     | Batch ID:      | 18827       |      | RunNo:    | 25690                    |      |              |      |  |
| Prep Date: | 4/22/2015 |     | Analysis Date: | 4/22/2015   |      | SeqNo:    | 761435                   |      | Units: mg/Kg |      |  |
| Analyte    | Result    | PQL | SPK value      | SPK Ref Val | %REC | LowLimit  | HighLimit                | %RPD | RPDLimit     | Qual |  |
| Chloride   | 14        | 1.5 | 15.00          | 0           | 92.0 | 90        | 110                      |      |              |      |  |

## Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1504929

23-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|                                |           |                          |           |             |   |          |              |      |          |      |
|--------------------------------|-----------|--------------------------|-----------|-------------|---|----------|--------------|------|----------|------|
| Sample ID                      | MB-18826  | SampType: MBLK           |           |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                     | PBS       | Batch ID: 18826          |           |             | RunNo: 25657                                      |          |              |      |          |      |
| Prep Date:                     | 4/22/2015 | Analysis Date: 4/22/2015 |           |             | SeqNo: 760594                                     |          | Units: mg/Kg |      |          |      |
| Analyte                        | Result    | PQL                      | SPK value | SPK Ref Val | %REC  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10                       |           |             |   |          |              |      |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50                       |           |             |   |          |              |      |          |      |
| Surr: DNOP                     | 8.4       |                          | 10.00     |             | 84.3  | 57.9     | 140          |      |          |      |

|                             |           |     |                          |             |   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID                   | LCS-18826 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 18826          |             | RunNo: 25657                                      |          |              |      |          |      |
| Prep Date:                  | 4/22/2015 |     | Analysis Date: 4/22/2015 |             | SeqNo: 760595                                     |          | 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           | 93.2  | 67.8     | 130          |      |          |      |
| Surr: DNOP                  | 4.1       |     | 5.000                    |             | 82.2  | 57.9     | 140          |      |          |      |

|            |           |     |                          |             |   |          |             |      |          |      |
|------------|-----------|-----|--------------------------|-------------|---|----------|-------------|------|----------|------|
| Sample ID  | MB-18778  |     | SampType: MBLK           |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |             |      |          |      |
| Client ID: | PBS       |     | Batch ID: 18778          |             | RunNo: 25657                                      |          |             |      |          |      |
| Prep Date: | 4/20/2015 |     | Analysis Date: 4/22/2015 |             | SeqNo: 760797                                     |          | Units: %REC |      |          |      |
| Analyte    | Result    | PQL | SPK value                | SPK Ref Val | %REC  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: DNOP | 11        |     | 10.00                    |             | 110   | 57.9     | 140         |      |          |      |

|            |           |     |                          |             |   |          |             |      |          |      |
|------------|-----------|-----|--------------------------|-------------|---|----------|-------------|------|----------|------|
| Sample ID  | LCS-18778 |     | SampType: LCS            |             | TestCode: EPA Method 8015D: Diesel Range Organics |          |             |      |          |      |
| Client ID: | LCSS      |     | Batch ID: 18778          |             | RunNo: 25657                                      |          |             |      |          |      |
| Prep Date: | 4/20/2015 |     | Analysis Date: 4/22/2015 |             | SeqNo: 760798                                     |          | Units: %REC |      |          |      |
| Analyte    | Result    | PQL | SPK value                | SPK Ref Val | %REC  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: DNOP | 5.1       |     | 5.000                    |             | 102   | 57.9     | 140         |      |          |      |

### Qualifiers:

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

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1504929

23-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|                               |        |                |           |             |                                  |          |           |      |          |      |
|-------------------------------|--------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID                     | 5ML RB | SampType:      | MBLK      | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID:                    | PBS    | Batch ID:      | R25665    | RunNo:      | 25665                            |          |           |      |          |      |
| Prep Date:                    |        | Analysis Date: | 4/22/2015 | SeqNo:      | 761154                           | 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                     | 860    |                | 1000      |             | 85.7                             | 80       | 120       |      |          |      |

|                               |               |                |           |             |                                  |          |           |      |          |      |
|-------------------------------|---------------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID                     | 2.5UG GRO LCS | SampType:      | LCS       | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID:                    | LCSS          | Batch ID:      | R25665    | RunNo:      | 25665                            |          |           |      |          |      |
| Prep Date:                    |               | Analysis Date: | 4/22/2015 | SeqNo:      | 761155                           | 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           | 100                              | 64       | 130       |      |          |      |
| Surr: BFB                     | 940           |                | 1000      |             | 94.4                             | 80       | 120       |      |          |      |

|            |           |                |           |             |                                  |          |           |      |          |      |
|------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID  | MB-18803  | SampType:      | MBLK      | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID: | PBS       | Batch ID:      | 18803     | RunNo:      | 25665                            |          |           |      |          |      |
| Prep Date: | 4/21/2015 | Analysis Date: | 4/22/2015 | SeqNo:      | 761162                           | Units:   | %REC      |      |          |      |
| Analyte    | Result    | PQL            | SPK value | SPK Ref Val | %REC                             | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB  | 850       |                | 1000      |             | 85.0                             | 80       | 120       |      |          |      |

|            |           |                |           |             |                                  |          |           |      |          |      |
|------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID  | LCS-18803 | SampType:      | LCS       | TestCode:   | EPA Method 8015D: Gasoline Range |          |           |      |          |      |
| Client ID: | LCSS      | Batch ID:      | 18803     | RunNo:      | 25665                            |          |           |      |          |      |
| Prep Date: | 4/21/2015 | Analysis Date: | 4/22/2015 | SeqNo:      | 761163                           | Units:   | %REC      |      |          |      |
| Analyte    | Result    | PQL            | SPK value | SPK Ref Val | %REC                             | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB  | 940       |                | 1000      |             | 94.4                             | 80       | 120       |      |          |      |

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1504929

23-Apr-15

Client: Blagg Engineering

Project: Stewart LS 8

|                            |        |                          |           |             |                                       |          |              |      |          |      |
|----------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                  | 5ML RB | SampType: MBLK           |           |             | TestCode: EPA Method 8021B: Volatiles |          |              |      |          |      |
| Client ID:                 | PBS    | Batch ID: R25665         |           |             | RunNo: 25665                          |          |              |      |          |      |
| Prep Date:                 |        | Analysis Date: 4/22/2015 |           |             | SeqNo: 761187                         |          | 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 | 0.92   |                          | 1.000     |             | 91.8                                  | 80       | 120          |      |          |      |

|                            |                |                          |           |             |                                       |          |              |      |          |      |
|----------------------------|----------------|--------------------------|-----------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID                  | 100NG BTEX LCS | SampType: LCS            |           |             | TestCode: EPA Method 8021B: Volatiles |          |              |      |          |      |
| Client ID:                 | LCSS           | Batch ID: R25665         |           |             | RunNo: 25665                          |          |              |      |          |      |
| Prep Date:                 |                | Analysis Date: 4/22/2015 |           |             | SeqNo: 761188                         |          | 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           | 112                                   | 76.6     | 128          |      |          |      |
| Toluene                    | 1.1            | 0.050                    | 1.000     | 0           | 112                                   | 75       | 124          |      |          |      |
| Ethylbenzene               | 1.1            | 0.050                    | 1.000     | 0           | 113                                   | 79.5     | 126          |      |          |      |
| Xylenes, Total             | 3.4            | 0.10                     | 3.000     | 0           | 112                                   | 78.8     | 124          |      |          |      |
| Surr: 4-Bromofluorobenzene | 1.0            |                          | 1.000     |             | 103                                   | 80       | 120          |      |          |      |

|                            |           |                          |           |             |                                       |          |             |      |          |      |
|----------------------------|-----------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | MB-18803  | SampType: MBLK           |           |             | TestCode: EPA Method 8021B: Volatiles |          |             |      |          |      |
| Client ID:                 | PBS       | Batch ID: 18803          |           |             | RunNo: 25665                          |          |             |      |          |      |
| Prep Date:                 | 4/21/2015 | Analysis Date: 4/22/2015 |           |             | SeqNo: 761191                         |          | Units: %REC |      |          |      |
| Analyte                    | Result    | PQL                      | SPK value | SPK Ref Val | %REC                                  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 0.92      |                          | 1.000     |             | 92.1                                  | 80       | 120         |      |          |      |

|                            |           |     |                          |             |                                       |          |             |      |          |      |
|----------------------------|-----------|-----|--------------------------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID                  | LCS-18803 |     | SampType: LCS            |             | TestCode: EPA Method 8021B: Volatiles |          |             |      |          |      |
| Client ID:                 | LCSS      |     | Batch ID: 18803          |             | RunNo: 25665                          |          |             |      |          |      |
| Prep Date:                 | 4/21/2015 |     | Analysis Date: 4/22/2015 |             | SeqNo: 761192                         |          | Units: %REC |      |          |      |
| Analyte                    | Result    | PQL | SPK value                | SPK Ref Val | %REC                                  | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 1.0       |     | 1.000                    |             | 100                                   | 80       | 120         |      |          |      |

### Qualifiers:

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

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

# Sample Log-In Check List

Client Name: **BLAGG**

Work Order Number: **1504929**

RcptNo: **1**

Received by/date: *AS 04/22/15*

Logged By: **Anne Thorne** 4/22/2015 8:00:00 AM *Anne Thorne*

Completed By: **Anne Thorne** 4/22/2015 *Anne Thorne*

Reviewed By: *Ja 04/22/15*

## Chain of Custody

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

## Log In

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

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

## Special Handling (if applicable)

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

|                      |       |       |   |
|----------------------|-------|-------|---|
| Person Notified:     | _____ | Date: | _____   |
| By Whom:             | _____ | Via:  | <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person |
| Regarding:           | _____ |       |   |
| Client Instructions: | _____ |       |   |

17. Additional remarks:

## 18. Cooler Information

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



| Chain-of-Custody Record                      |   | Turn-Around Time:  |
|--|---|--|
| Client: <b>BP AMERICA</b>                    | <input type="checkbox"/> Standard   | <input checked="" type="checkbox"/> Rush <b>SAME DAY</b> |
| <b>BLAGG</b>                                 | Project Name:   |  |
| Mailing Address: <b>P.O. Box 97</b>          | <b>STEWART LS 8</b>   |  |
| <b>BLOOMFIELD NM 87413</b>                   | Project #:  |  |
| Phone #: <b>505-320-1193</b>                 | Project Manager:  |  |
| email or Fax#:                               | <b>J. BLAGG</b>   |  |
| QA/QC Package:                               |   |  |
| <input checked="" type="checkbox"/> Standard | <input type="checkbox"/> Level 4 (Full Validation)                          |  |
| Accreditation                                | Sampler: <b>J. Blagg</b>  |  |
| <input type="checkbox"/> NELAP               | On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |  |
| <input type="checkbox"/> Other _____         | Sample Temperature: <b>1.0</b>  |  |
| <input type="checkbox"/> EDD (Type) _____    |   |  |

☐ Standard ☒ Rush SAME DAY

STEWART LS 8

Project Manager:

J. BLAGG

Sampler: I. Beale

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

[illegible]

|                    |               |                                   |                               |                   |              |
|--------------------|---------------|-----------------------------------|-------------------------------|-------------------|--------------|
| Date:<br>4/21/2015 | Time:<br>1427 | Relinquished by:<br>Jill Blegg    | Received by:<br>Christie Warr | Date<br>4/21/2015 | Time<br>1427 |
| Date:<br>4/21/15   | Time:<br>1740 | Relinquished by:<br>Christie Warr | Received by:<br>Don           | Date<br>4/22/15   | Time<br>0800 |

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

|  |   |   |   |   |  |
|--|---|---|---|---|--|
|  | X | X | X | X | BTEX <del>MIBK + MIB's</del> (8021)        |
|  |   |   |   |   | BTEX + MTBE + TPH (Gas only)               |
|  | X | X | X | X | TPH 8015B (GRO / DRO / <del>THP</del> )    |
|  |   |   |   |   | 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)                            |
|  | X | X | X | X | CHLORIDE                                   |
|  |   |   |   |   |  |
|  |   |   |   |   |  |
|  |   |   |   |   |  |
|  |   |   |   |   | Air Bubbles (Y or N)                       |

Air Bubbles (Y or N)

Remarks: Bill BP  
Contact: Jeff Peace  
Parker: ZEVH01REME

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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-138  
Revised March 12, 2007

\*Surface Waste Management Facility Operator  
and Generator shall maintain and make this  
documentation available for Division inspection.

## REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

|   |  |
|---|--|
| <b>1. Generator Name and Address:</b><br>BP America Production Co. * 200 Energy Court * Farmington, NM 87401  |  |
| <b>2. Originating Site:</b> Stewart LS 8 - SW/4 Section 28, T30N, R10W  |  |
| <b>3. Location of Material (Street Address, City, State or ULSTR):</b> SW/4 Section 28, T30N, R10W<br>or Physical Address: 200 Energy Court, Farmington, NM 87401   |  |
| <b>4. Source and Description of Waste:</b><br>Hydrocarbon impacted soil due to condensate release<br>Estimated Volume <u>100</u> yd <sup>3</sup> / bbls Known Volume (to be entered by the operator at the end of the haul) <u>280</u> yd <sup>3</sup> / bbls<br><i>Handwritten notes: 4/21/15 - 340cy, 4/30/15 - 220cy, 4/17/15 - 110cy, 4/10/15 - 210cy, 4/15/15 - 140cy, 4/14/15 - 100cy</i>   |  |
| <b>5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS</b><br>I, <u>Jeff Peace</u> <i>Jeff Peace</i> , representative or authorized agent for <u>BP America Production Company</u> do hereby<br><b>Generator Signature</b><br>certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)<br><input checked="" type="checkbox"/> RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with other exempt waste. <u>Operator Use Only: Waste Acceptance Frequency</u> <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Per Load<br><input type="checkbox"/> RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste having characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous (Check the appropriate items)<br><input type="checkbox"/> MSDS Information <input type="checkbox"/> RCRA Hazardous Waste Analysis <input checked="" type="checkbox"/> Process Knowledge <input type="checkbox"/> Other (Provide description in Block 6)<br><b>GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS</b><br>I, <u>Jeff Peace</u> <i>Jeff Peace</i> , representative for <u>BP America</u> <i>IEI</i> do hereby certify that<br><b>Representative/Agent Signature</b> <i>Heathle Solph</i><br>representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the results have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The following documentation of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC. |  |
| <b>6. Transporter:</b> Crossfire  |  |

### OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: JFJ Landfarm) / Industrial Ecosystem, Inc. Permit No. NM 01-0010B

Address of Facility: # 49 CR 3150 Aztec, NM 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Heathle Solph

TITLE: Clerk

DATE: 4/13/15

SIGNATURE: Heathle Solph  
Surface Waste Management Facility Authorized Agent

TELEPHONE: 505-632-1782 FAX NO.: 505-632-1876 or 505-334-1003

*Handwritten notes: CL-132, ph-17, 4/14/15*