OIL CONS. DIV DIST. 3

AUG 11 2015

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company: BP | Contact: Steve Moskal |
| Address: 200 Energy Court, Farmington, NM 87401 | Telephone No.: 505-326-9497 |
| Facility Name: Gallegos Canyon Unit 185 | Facility Type: Natural gas well |

| | | |
|---|---|---|
| Surface Owner: Tribal | Mineral Owner: Private | API No. 3004507085 |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County: San Juan |
|---|---|---|---|---|---|---|---|---|
| D | 33 | 28N | 12W | 790 | North | 890 | West | |

**Latitude** 36.62438 **Longitude** -108.12305

## 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: unknown | Date and Hour of Discovery: October 11, 2013 – 11:45 AM |
| Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required | If YES, To Whom? | |
| By Whom? | Date and Hour: | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | |

If a Watercourse was Impacted, Describe Fully.*

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

During removal of a below grade tank, contaminated soil was discovered. Initial investigation with 10 bore holes defined the impacted area and found groundwater at an average depth of 8 feet below ground surface. Impacted soil was excavated and removed and groundwater investigation wells were drilled and installed. Groundwater was sampled and the analyses showed the samples were below standards for BTEX but results were high for sulfate and TDS. Sampling of produced water at the well was done to determine sulfate and TDS values and to verify if those high values in the investigation wells are due to produced water.

Describe Area Affected and Cleanup Action Taken.* Groundwater investigation wells installed in the area with impacted soil that was excavated showed acceptable levels of BTEX but sulfate was 770 ppm and TDS was 1,660 ppm. A sample of the produced water from the well was taken and analyzed for sulfate and TDS to determine if produced water had impacted the groundwater. The analysis of the produced water resulted in sulfate of 58 ppm and TDS of 8,470 ppm. The value for sulfate is well below the value seen in the investigation well. The value for TDS is slightly elevated in the monitoring well, but below the concentration of the produced water concentration and consistent with regional background concentrations. The results indicate the produced water had no impact on the groundwater.

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: Attached ☐ |
| Date: August 6, 2015 Phone: 505-326-9497 | |

* Attach Additional Sheets If Necessary

#NCK 1423952566

42

# BP America: GCU 185
## (D) Sec 33 – T28N – R12W
## San Juan County, New Mexico
## API: 30-045-07085

Summary Record of Impact Remediation

October 11, 2013: Soils impacted with hydrocarbons encountered during closure of 95 barrel BGT. Impacts appeared to be limited to well pad. Groundwater estimated to be within 8 feet of ground surface.

Site Closure Standard Determined at 1,000 ppm TPH based on:

Horizontal Distance to Dry Wash > 1,000 feet (00 points)
Nearest Water Well > 1,000 feet (0 points)
Depth to Groundwater < 25 feet (20 points)

January 28, 2014: GeoProbe investigation of impacts, with 10 probe holes extended to an average depth of 8 feet below grade, determined impacts appeared to be limited to a small area surrounding the 95 barrel BGT. No secondary impacts were encountered.

August 25, 2014: Excavation remediation crew moved to site and begins excavation of impacts to below water table. Approximate excavation size at 40' x 40' x 9' deep (water table appeared to be between 7' – 8' below grade). Conduct sampling of north, east and south sidewalls for closure (Overhead View Sample ID's: A – E). Additionally, sample overhead burden stock pile to confirm no impacts to that pile.

August 26, 2014: Receive laboratory reports from prior days sampling. All samples reported at non-detect for TPH and BTEX. Excavation size extended further west to a final size of approximately 50' x 40' x 9' deep. Conduct sampling of west sidewall for closure (Overhead View Sample ID's: G, H and I).

August 27, 2014: Receive laboratory reports from prior days sampling. All samples reported at non-detect for TPH and BTEX. Field crew initiates backfill of remedial excavation. Approximate soil volume transported to Envirotech Landfarm = 280 CY.

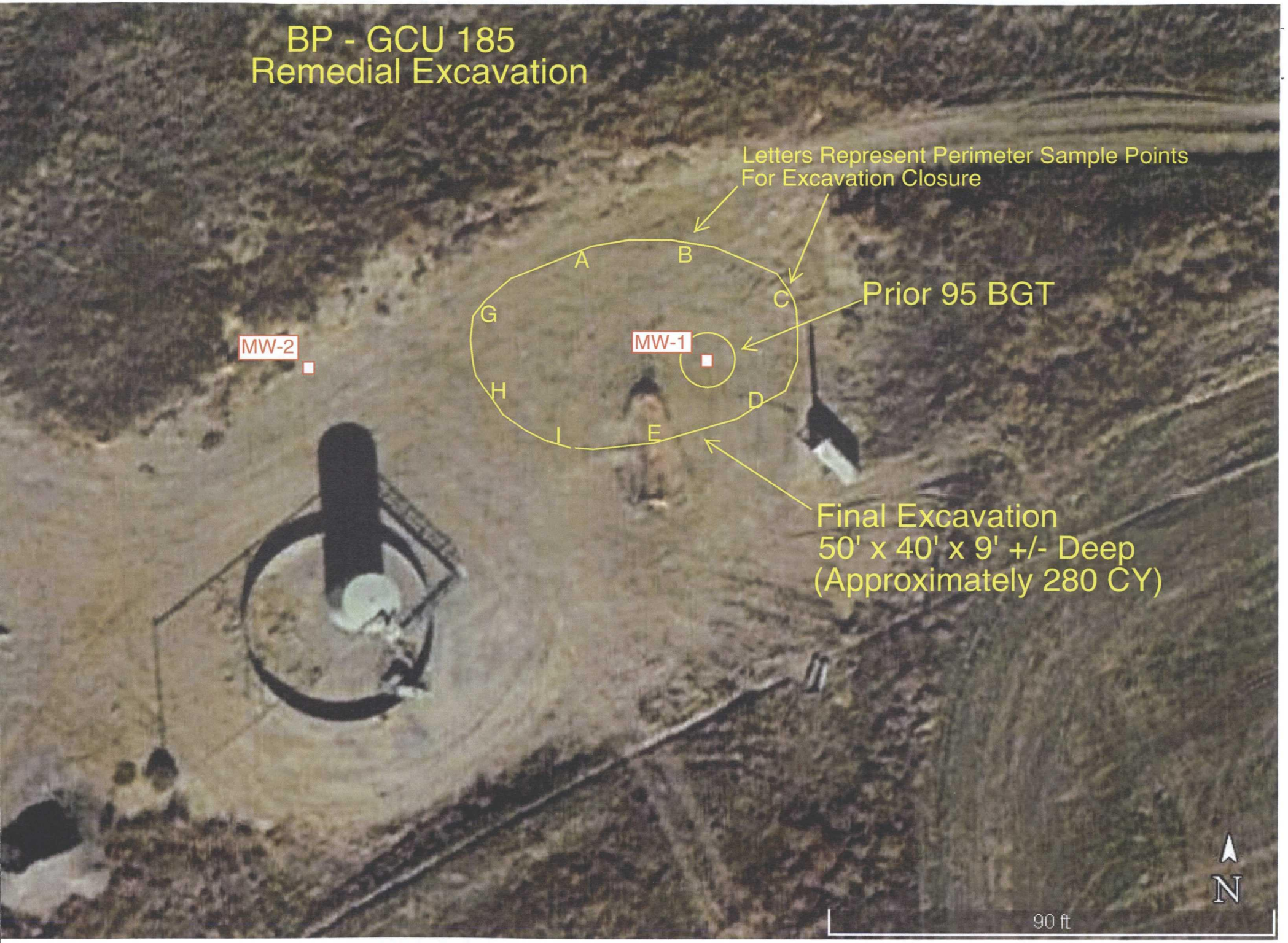
November 18, 2014: Install a groundwater monitor well (MW-1) at the original source of impacts (95 bbl BGT). Also install a down gradient monitor well (MW-2) in the event that the source area well discovered groundwater impacts.

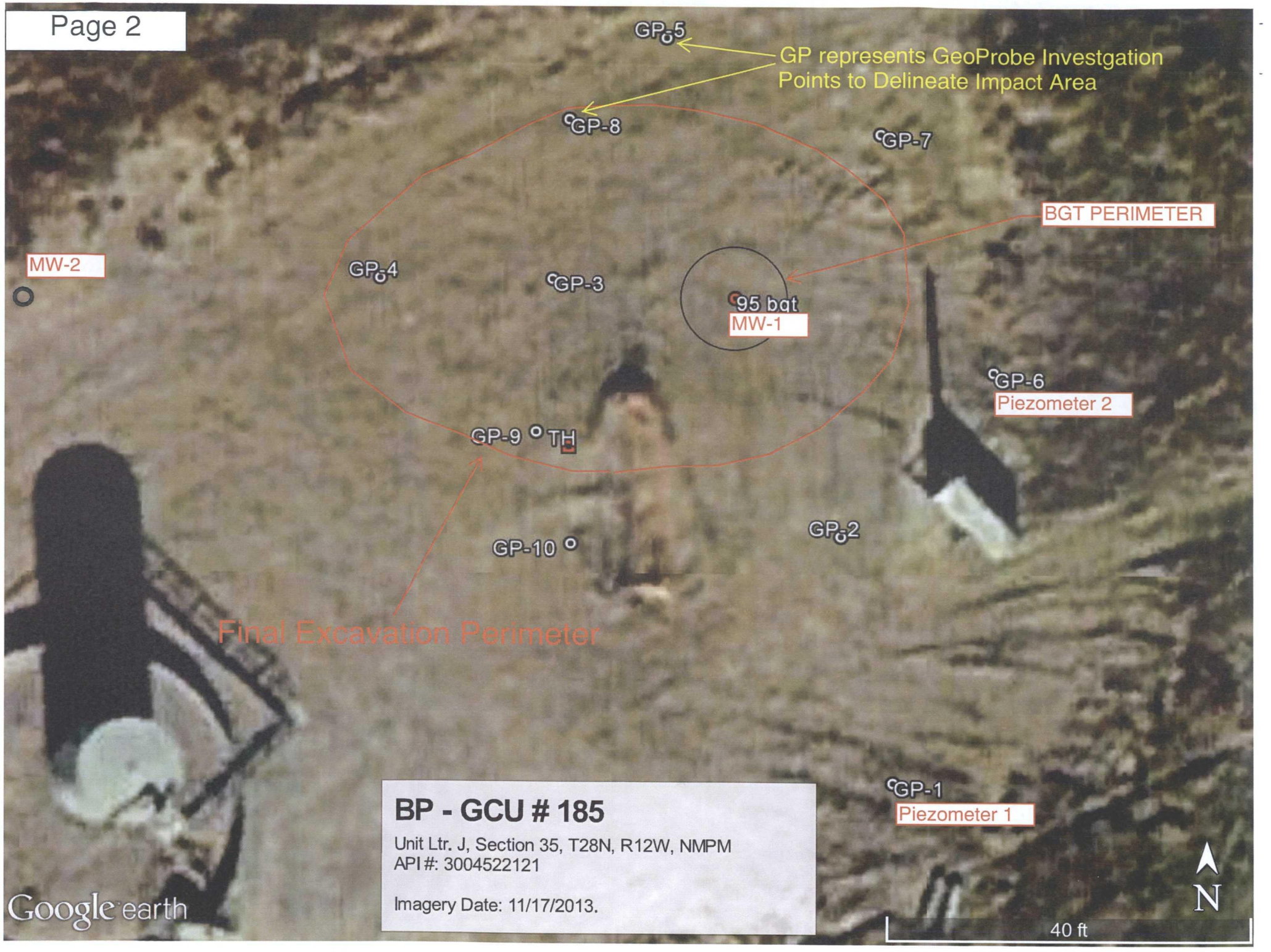
January 21, 2015: Develop MW-1

January 22, 2015: Sample MW-1 for BTEX, Chlorides, TDS, Nitrate/Nitrite, Fluoride and Sulfate.

February 4, 2015: Receive lab reports from sampling MW-1. Non detect for BTEX. Chlorides, Nitrate/Nitrite and Fluoride below regulatory standards. Sulfate and TDS exceed regulatory standards (see attached table).

February 10, 2015: Sample on-site produced water tank to evaluate Sulfate and TDS. Test results indicate that elevated parameters in MW-1 are naturally occurring and not from a produced water release.


BP - GCU 185
Remedial Excavation
Letters Represent Perimeter Sample Points
For Excavation Closure
A
B
C
D
E
G
H
I
MW-1
MW-2
Prior 95 BGT
Final Excavation
50' x 40' x 9' +/- Deep
(Approximately 280 CY)
N
90 ft


GP-5
GP represents GeoProbe Investgation
Points to Delineate Impact Area
GP-8
GP-7
BGT PERIMETER
MW-2
GP-4
GP-3
95 bgt
MW-1
GP-6
Piezometer 2
GP-9
TH
GP-10
GP-2
Final Excavation Perimeter
GP-1
Piezometer 1
BP - GCU # 185
Unit Ltr. J, Section 35, T28N, R12W, NMPM
API #: 3004522121
Imagery Date: 11/17/2013.
Google earth
N
40 ft

# BLAGG ENGINEERING, INC.

P.O. BOX 87

BLOOMFIELD, NM 87413

(505) 632-1199


# BORE / TEST HOLE REPORT

| | |
|---|---|
| BORING #..... | see below |
| MW #..... | NA |
| PAGE #..... | 1 |
| DATE STARTED | 01/28/14 |
| DATE FINISHED | 01/28/14 |
| OPERATOR..... | CP |
| PREPARED BY | NJV |

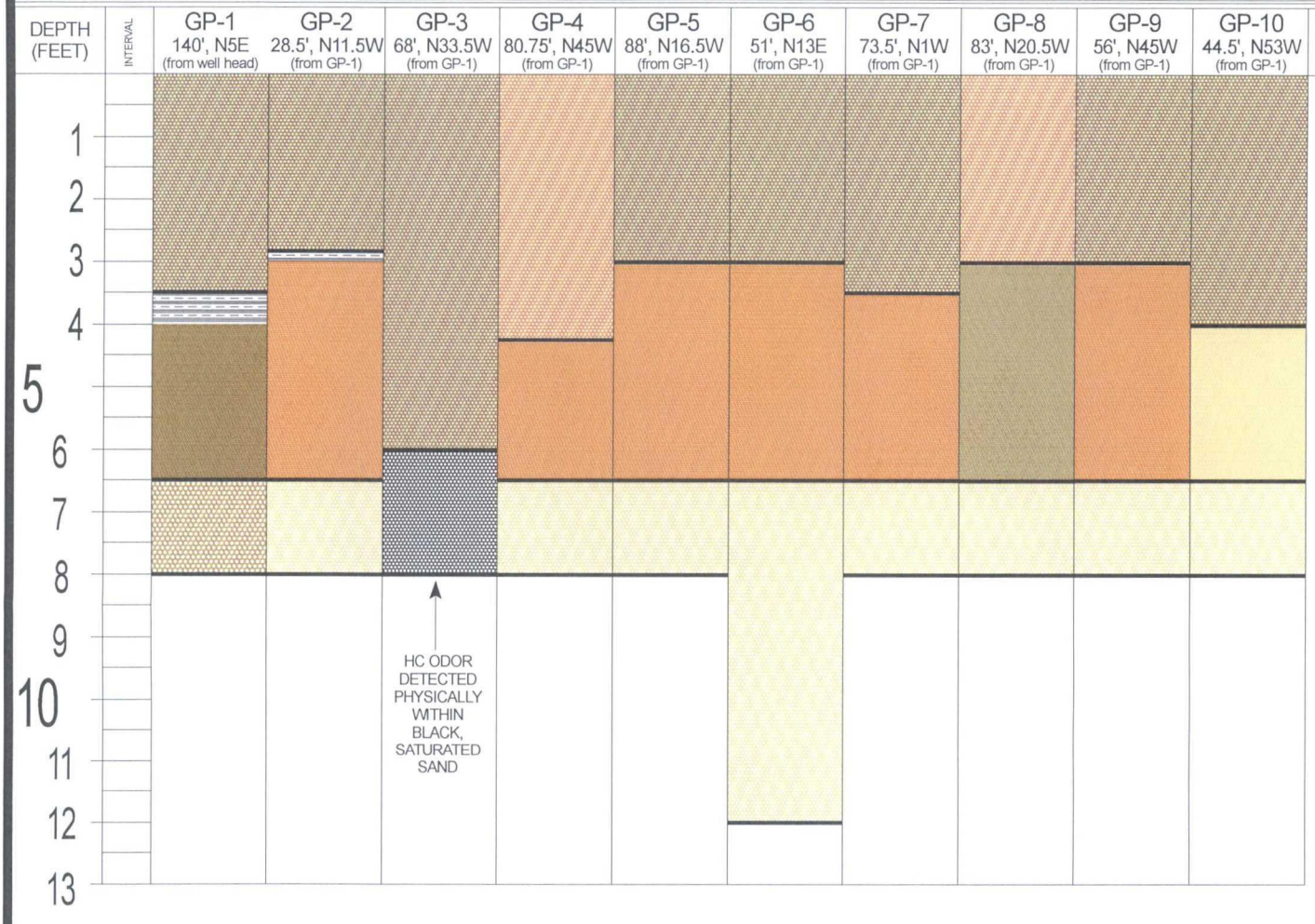
CLIENT: BP AMERICA PRODUCTION CO.

LOCATION NAME: GCU # 185 - (release investigation) Unit J, Sec. 35, T28N, R12W

CONTRACTORS: BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.

EQUIPMENT USED: EARTHPROBE 200 (GEOPROBE)

95 BGT LOCATION: 194 FT., N1.5W FROM WELL HEAD.




NOTES:

- SAND
- SAND TO SILTY SAND.
- CLAY.

1) SATURATED SOILS COMMENCED AT APPROX. 6.5' - 7' BELOW GRADE.

2) GP-2 THRU GP-10 LOCATIONS REFERENCED FROM GP-1 POSITION.

3) UNKNOWN ORIGIN OF BLACK CLAY WITHIN GP -1 (0.5' THICKNESS) & GP-2 (0.2' THICKNESS). NO HC ODOR DETECTED PHYSICALLY.

DRAWING: GCU 185 MULTI-BORE LOG. SKF | DATE: 01/29/14 | DWN BY: NJV

# BP AMERICA PRODUCTION COMPANY

## GCU # 185 - (Release beneath 95 BGT)

Unit Letter J, Section 35, T28N, R12W - API Number: 30-045-22121

## Field & Laboratory Data from Groundwater Monitor Wells

| | FIELD PARAMETERS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SAMPLE ID | SAMPLE DATE | SAMPLE TIME | DEPTH TO WATER (feet) | TOTAL MW LENGTH (feet) | pH | Conductivity (µmhos/cm) | Temperature (°Celcius) | Volume Purged (gallons) |
| MW # 2 (source area) | 01/22/15 | 1005 | 7.28 | 19.28 | 7.27 | 1,300 | 10.0 | 4.00 |
| LP AGT PRODUCED WATER | 02/10/15 | 1530 | NA | NA | NA | NA | NA | NA |
| NMWQCC STANDARDS - | | | | | 6 - 9 | | | |

| | LABORATORY PARAMETERS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SAMPLE ID | Fluoride (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | Nitrate-Nitrite as N (mg/L) | TDS (mg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl - benzene (µg/L) | Total Xylenes (µg/L) |
| MW # 2 (source area) | 0.34 | 88 | 770 | 22 | 1,660 | ND | ND | ND | ND |
| LP AGT PRODUCED WATER | NA | NA | 58 | ND | 8,470 | NA | BA | NA | NA |
| NMWQCC STANDARDS - | 1.6 | 250 | 600 | 10 | 1,000 | 10 | 750 | 750 | 620 |

Notes: Depth to water measured from casing top of monitor well.
Groundwater standards are applied to values assigned in blue highlighted boxes or confirmed background levels, which ever is higher.

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

**Analytical Report**
Lab Order **1501817**
Date Reported: **2/4/2015**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** GCU #185
**Lab ID:** 1501817-001 **Matrix:** AQUEOUS

**Client Sample ID:** MW #2
**Collection Date:** 1/22/2015 10:05:00 AM
**Received Date:** 1/23/2015 6:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 1.0 | | µg/L | 1 | 1/23/2015 2:42:40 PM | R23861 |
| Toluene | ND | 1.0 | | µg/L | 1 | 1/23/2015 2:42:40 PM | R23861 |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 1/23/2015 2:42:40 PM | R23861 |
| Xylenes, Total | ND | 2.0 | | µg/L | 1 | 1/23/2015 2:42:40 PM | R23861 |
| Surr: 4-Bromofluorobenzene | 124 | 66.6-167 | | %REC | 1 | 1/23/2015 2:42:40 PM | R23861 |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **lgp** | |
| Fluoride | 0.34 | 0.10 | | mg/L | 1 | 1/23/2015 4:27:37 PM | R23873 |
| Chloride | 88 | 10 | | mg/L | 20 | 1/23/2015 5:04:51 PM | R23873 |
| Nitrogen, Nitrite (As N) | ND | 0.10 | | mg/L | 1 | 1/23/2015 4:27:37 PM | R23873 |
| Bromide | 0.65 | 0.10 | | mg/L | 1 | 1/23/2015 4:27:37 PM | R23873 |
| Nitrogen, Nitrate (As N) | 22 | 2.0 | * | mg/L | 20 | 1/23/2015 5:04:51 PM | R23873 |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | | mg/L | 1 | 1/23/2015 4:27:37 PM | R23873 |
| Sulfate | 770 | 10 | | mg/L | 20 | 1/23/2015 5:04:51 PM | R23873 |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **JLF** | |
| Calcium | 220 | 5.0 | | mg/L | 5 | 1/26/2015 12:24:40 PM | R23882 |
| Magnesium | 70 | 1.0 | | mg/L | 1 | 1/26/2015 11:15:41 AM | R23882 |
| Potassium | 1.1 | 1.0 | | mg/L | 1 | 1/26/2015 11:15:41 AM | R23882 |
| Sodium | 170 | 5.0 | | mg/L | 5 | 1/26/2015 12:24:40 PM | R23882 |
| **SM2510B: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **JRR** | |
| Conductivity | 1900 | 0.010 | | µmhos/cm | 1 | 1/27/2015 1:38:15 PM | R23941 |
| **SM2320B: ALKALINITY** | | | | | | Analyst: **JRR** | |
| Bicarbonate (As CaCO3) | 260 | 20 | | mg/L CaCO3 | 1 | 1/27/2015 1:38:15 PM | R23941 |
| Carbonate (As CaCO3) | ND | 2.0 | | mg/L CaCO3 | 1 | 1/27/2015 1:38:15 PM | R23941 |
| Total Alkalinity (as CaCO3) | 260 | 20 | | mg/L CaCO3 | 1 | 1/27/2015 1:38:15 PM | R23941 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** | |
| Total Dissolved Solids | 1660 | 40.0 | * | mg/L | 1 | 1/28/2015 2:35:00 PM | 17421 |

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

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1501817**

*04-Feb-15*

**Client:** Blagg Engineering
**Project:** GCU #185

| Sample ID **MB** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R23873** | RunNo: **23873** |
| Prep Date: | Analysis Date: **1/23/2015** | SeqNo: **704315** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.10 | | | | | | | | |
| Chloride | ND | 0.50 | | | | | | | | |
| Nitrogen, Nitrite (As N) | ND | 0.10 | | | | | | | | |
| Bromide | ND | 0.10 | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | 0.10 | | | | | | | | |
| Phosphorus, Orthophosphate (As P | ND | 0.50 | | | | | | | | |
| Sulfate | ND | 0.50 | | | | | | | | |

| Sample ID **LCS** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R23873** | RunNo: **23873** |
| Prep Date: | Analysis Date: **1/23/2015** | SeqNo: **704316** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.49 | 0.10 | 0.5000 | 0 | 98.9 | 90 | 110 | | | |
| Chloride | 4.9 | 0.50 | 5.000 | 0 | 98.2 | 90 | 110 | | | |
| Nitrogen, Nitrite (As N) | 0.97 | 0.10 | 1.000 | 0 | 96.8 | 90 | 110 | | | |
| Bromide | 2.5 | 0.10 | 2.500 | 0 | 99.5 | 90 | 110 | | | |
| Nitrogen, Nitrate (As N) | 2.6 | 0.10 | 2.500 | 0 | 103 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P | 5.0 | 0.50 | 5.000 | 0 | 99.5 | 90 | 110 | | | |
| Sulfate | 10 | 0.50 | 10.00 | 0 | 100 | 90 | 110 | | | |

| Sample ID **MB** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R23873** | RunNo: **23873** |
| Prep Date: | Analysis Date: **1/23/2015** | SeqNo: **704371** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.10 | | | | | | | | |
| Chloride | ND | 0.50 | | | | | | | | |
| Nitrogen, Nitrite (As N) | ND | 0.10 | | | | | | | | |
| Bromide | ND | 0.10 | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | 0.10 | | | | | | | | |
| Phosphorus, Orthophosphate (As P | ND | 0.50 | | | | | | | | |
| Sulfate | ND | 0.50 | | | | | | | | |

| Sample ID **LCS** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R23873** | RunNo: **23873** |
| Prep Date: | Analysis Date: **1/23/2015** | SeqNo: **704372** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.51 | 0.10 | 0.5000 | 0 | 102 | 90 | 110 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1501817**

*04-Feb-15*

**Client:** Blagg Engineering

**Project:** GCU #185

| Sample ID **LCS** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R23873** | RunNo: **23873** |
| Prep Date: | Analysis Date: **1/23/2015** | SeqNo: **704372** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4.8 | 0.50 | 5.000 | 0 | 96.1 | 90 | 110 | | | |
| Nitrogen, Nitrite (As N) | 0.95 | 0.10 | 1.000 | 0 | 95.5 | 90 | 110 | | | |
| Bromide | 2.4 | 0.10 | 2.500 | 0 | 95.7 | 90 | 110 | | | |
| Nitrogen, Nitrate (As N) | 2.5 | 0.10 | 2.500 | 0 | 99.3 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P | 4.9 | 0.50 | 5.000 | 0 | 97.0 | 90 | 110 | | | |
| Sulfate | 9.7 | 0.50 | 10.00 | 0 | 96.7 | 90 | 110 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1501817**

*04-Feb-15*

**Client:** Blagg Engineering
**Project:** GCU #185

| Sample ID **5ML RB** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R23861** | RunNo: **23861** |
| Prep Date: | Analysis Date: **1/23/2015** | SeqNo: **704126** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 22 | | 20.00 | | 110 | 66.6 | 167 | | | |

| Sample ID **100NG BTEX LCS** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R23861** | RunNo: **23861** |
| Prep Date: | Analysis Date: **1/23/2015** | SeqNo: **704127** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 21 | 1.0 | 20.00 | 0 | 106 | 80 | 120 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 106 | 80 | 120 | | | |
| Ethylbenzene | 22 | 1.0 | 20.00 | 0 | 108 | 80 | 120 | | | |
| Xylenes, Total | 66 | 2.0 | 60.00 | 0 | 109 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 24 | | 20.00 | | 122 | 66.6 | 167 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1501817**

*04-Feb-15*

**Client:** Blagg Engineering
**Project:** GCU #185

| Sample ID **MB** | SampType: **MBLK** | TestCode: **EPA Method 6010B: Dissolved Metals** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R23882** | RunNo: **23882** |
| Prep Date: | Analysis Date: **1/26/2015** | SeqNo: **704565** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 1.0 | | | | | | | | |
| Magnesium | ND | 1.0 | | | | | | | | |
| Potassium | ND | 1.0 | | | | | | | | |
| Sodium | ND | 1.0 | | | | | | | | |

| Sample ID **LCS** | SampType: **LCS** | TestCode: **EPA Method 6010B: Dissolved Metals** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R23882** | RunNo: **23882** |
| Prep Date: | Analysis Date: **1/26/2015** | SeqNo: **704566** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 49 | 1.0 | 50.00 | 0 | 98.6 | 80 | 120 | | | |
| Magnesium | 51 | 1.0 | 50.00 | 0 | 102 | 80 | 120 | | | |
| Potassium | 49 | 1.0 | 50.00 | 0 | 97.3 | 80 | 120 | | | |
| Sodium | 50 | 1.0 | 50.00 | 0 | 101 | 80 | 120 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1501817**

*04-Feb-15*

**Client:** Blagg Engineering
**Project:** GCU #185

| Sample ID **mb-1** | SampType: **MBLK** | TestCode: **SM2320B: Alkalinity** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R23941** | RunNo: **23941** | | | | | | | |
| Prep Date: | Analysis Date: **1/27/2015** | SeqNo: **706046** | Units: **mg/L CaCO3** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | ND | 20 | | | | | | | | |

| Sample ID **lcs-1** | SampType: **LCS** | TestCode: **SM2320B: Alkalinity** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R23941** | RunNo: **23941** | | | | | | | |
| Prep Date: | Analysis Date: **1/27/2015** | SeqNo: **706047** | Units: **mg/L CaCO3** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 79 | 20 | 80.00 | 0 | 98.9 | 90 | 110 | | | |

| Sample ID **mb-2** | SampType: **MBLK** | TestCode: **SM2320B: Alkalinity** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R23941** | RunNo: **23941** | | | | | | | |
| Prep Date: | Analysis Date: **1/27/2015** | SeqNo: **706070** | Units: **mg/L CaCO3** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | ND | 20 | | | | | | | | |

| Sample ID **lcs-2** | SampType: **LCS** | TestCode: **SM2320B: Alkalinity** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R23941** | RunNo: **23941** | | | | | | | |
| Prep Date: | Analysis Date: **1/27/2015** | SeqNo: **706071** | Units: **mg/L CaCO3** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 80 | 20 | 80.00 | 0 | 101 | 90 | 110 | | | |

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1501817**

*04-Feb-15*

**Client:** Blagg Engineering
**Project:** GCU #185

| Sample ID | **MB-17421** | SampType: | **MBLK** | | TestCode: | **SM2540C MOD: Total Dissolved Solids** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBW** | Batch ID: | **17421** | | RunNo: | **23956** | | | | |
| Prep Date: | **1/27/2015** | Analysis Date: | **1/28/2015** | | SeqNo: | **706421** | Units: | **mg/L** | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | 20.0 | | | | | | | | |

| Sample ID | **LCS-17421** | SampType: | **LCS** | | TestCode: | **SM2540C MOD: Total Dissolved Solids** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSW** | Batch ID: | **17421** | | RunNo: | **23956** | | | | |
| Prep Date: | **1/27/2015** | Analysis Date: | **1/28/2015** | | SeqNo: | **706422** | Units: | **mg/L** | | |

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

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: BLAGG Work Order Number: 1501817 RcptNo: 1

Received by/date: AT 01/23/15

Logged By: Anne Thorne 1/23/2015 6:50:00 AM Anne Thorne

Completed By: Anne Thorne 1/23/2015 Anne Thorne

Reviewed By: CS 01/23/15

## 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: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

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

# Chain-of-Custody Record

Client: BLAGG ENGR / BP AMERICA

Mailing Address: P.O. BOX 87

BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: GCU #185

Project #: ~~GCU #185~~ NV

Project Manager: NELSON VELEZ NV

Sampler: NELSON VELEZ NV

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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


**Analysis Request**

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1501817 | BTEX + ~~MTBE~~ + TMBs (8021B) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) NV | CATIONS/ANIONS BALANCE | OK NV | GAB SAMPLE | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/22/15 | 1005 | WATER | MW #2 | 40ml VOA-2 | HCl & COOL | -001 | ✓ | | | | | | | | | | NV | ~~✓~~ | OK NV | ~~✓~~ | |
| 1/22/15 | 1005 | WATER | MW #2 | 500ml-1 | COOL | -001 | | | | | | | | | | | | ✓ | | ✓ | |

Date: 1/22/15 Time: 1640 Relinquished by: [signature]

Received by: [signature] Date: 1/22/15 Time: 1640

Date: 1/24/15 Time: 1744 Relinquished by: [signature]

Received by: [signature] Date: 01/23/15 Time: 0650

Remarks: NMOCD Cons

BILL BP DIRECTLY

CONTACT: JEFF PEACE

200 ENERGY COURT

FARMINGTON, NM 87401

PAYKEY: ZEVH01REME

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

**Analytical Report**
Lab Order **1502463**
Date Reported: **2/16/2015**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering
**Project:** GCU #185
**Lab ID:** 1502463-001 **Matrix:** AQUEOUS

**Client Sample ID:** LP AGT Produced Water
**Collection Date:** 2/10/2015 1:30:00 PM
**Received Date:** 2/11/2015 8:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Nitrogen, Nitrate (As N) | ND | 0.50 | | mg/L | 5 | 2/11/2015 5:31:42 PM | R24263 |
| Sulfate | 58 | 2.5 | | mg/L | 5 | 2/11/2015 5:31:42 PM | R24263 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** | |
| Total Dissolved Solids | 8470 | 200 | * | mg/L | 1 | 2/13/2015 11:36:00 AM | 17720 |

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#: **1502463**

*16-Feb-15*

**Client:** Blagg Engineering
**Project:** GCU #185

| Sample ID **MB** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R24263** | RunNo: **24263** |
| Prep Date: | Analysis Date: **2/11/2015** | SeqNo: **715016** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Nitrate (As N) | ND | 0.10 | | | | | | | | |
| Sulfate | ND | 0.50 | | | | | | | | |

| Sample ID **LCS** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R24263** | RunNo: **24263** |
| Prep Date: | Analysis Date: **2/11/2015** | SeqNo: **715017** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Nitrate (As N) | 2.5 | 0.10 | 2.500 | 0 | 102 | 90 | 110 | | | |
| Sulfate | 9.9 | 0.50 | 10.00 | 0 | 98.6 | 90 | 110 | | | |

| Sample ID **MB** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R24263** | RunNo: **24263** |
| Prep Date: | Analysis Date: **2/11/2015** | SeqNo: **715070** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Nitrate (As N) | ND | 0.10 | | | | | | | | |
| Sulfate | ND | 0.50 | | | | | | | | |

| Sample ID **LCS** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R24263** | RunNo: **24263** |
| Prep Date: | Analysis Date: **2/11/2015** | SeqNo: **715071** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Nitrate (As N) | 2.6 | 0.10 | 2.500 | 0 | 103 | 90 | 110 | | | |
| Sulfate | 9.9 | 0.50 | 10.00 | 0 | 99.0 | 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#: **1502463**

*16-Feb-15*

**Client:** Blagg Engineering
**Project:** GCU #185

| Sample ID **MB-17720** | SampType: **MBLK** | TestCode: **SM2540C MOD: Total Dissolved Solids** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **17720** | RunNo: **24287** |
| Prep Date: **2/12/2015** | Analysis Date: **2/13/2015** | SeqNo: **715683** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | 20.0 | | | | | | | | |

| Sample ID **LCS-17720** | SampType: **LCS** | TestCode: **SM2540C MOD: Total Dissolved Solids** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **17720** | RunNo: **24287** |
| Prep Date: **2/12/2015** | Analysis Date: **2/13/2015** | SeqNo: **715684** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1010 | 20.0 | 1000 | 0 | 101 | 80 | 120 | | | |

**Qualifiers:**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: BLAGG | Work Order Number: 1502463 | RcptNo: 1

Received by/date: AG 02/11/15

Logged By: **Ashley Gallegos** 2/11/2015 8:30:00 AM

Completed By: **Ashley Gallegos** 2/11/2015 8:58:16 AM

Reviewed By: 02/11/15

## 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 ☐ | # of preserved bottles checked for pH: _____ (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | Adjusted? |
| 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 ☐ | Checked by: _____ |

## Special Handling (If applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

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

# Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

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

Phone #: (505) 632-1199

email or Fax#:

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

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: GCU # 185

Project #:

Project Manager: NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0


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


Analysis Request

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1502403 | BTEX + MTBE + TMB's (8021B) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH (8310 or 8270SIMS) | RCRA 8 Metals | Anions (~~F,Cl,NO3,NO2,PO4,SO4~~) | Total Dissolved Solids | Iron, Ferrous (filtered) | Nitrate N / Nitrite N | | | Grab sample | 5 pt. composite sample | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/10/15 | 1330 | WATER | LP AGT PRODUCED WATER | 500 ml - 1 | Cool | -001 | | | | | | | | √ | √ | | | | | √ | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | |

Date: 2/10/15 Time: 1603 Relinquished by: [signature] Received by: [signature] Date: 2/10/15 Time: 1603

Date: 2/10/15 Time: 1744 Relinquished by: [signature] Received by: [signature] Date: 2/11/15 Time: 0830

Remarks: SULFATE & NITRATE ONLY (ANIONS)

**BILL DIRECTLY TO BP:**
Jeff Peace, 200 Energy Court, Farmington, NM 87401

Paykey: ZEVH01REME

envirotech
Analytical Laboratory

| | | | |
|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 27-Aug-14 14:41 |

## Analyical Report for Samples

| Client Sample ID | Lab Sample ID | Matrix | Sampled | Received | Container |
|---|---|---|---|---|---|
| TH-A 4'-8' | P408103-01A | Soil | 08/25/14 | 08/25/14 | Glass Jar, 4 oz. |
| TH-B 4'-8' | P408103-02A | Soil | 08/25/14 | 08/25/14 | Glass Jar, 4 oz. |
| TH-C 4'-8' | P408103-03A | Soil | 08/25/14 | 08/25/14 | Glass Jar, 4 oz. |
| TH-D 4'-8' | P408103-04A | Soil | 08/25/14 | 08/25/14 | Glass Jar, 4 oz. |
| TH-E 4'-8' | P408103-05A | Soil | 08/25/14 | 08/25/14 | Glass Jar, 4 oz. |
| Overburden Backfill 10-pt | P408103-06A | Soil | 08/25/14 | 08/25/14 | Glass Jar, 4 oz. |



5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com
laboratory@envirotech-inc.com

envirotech
Analytical Laboratory

| | | | |
|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 27-Aug-14 14:41 |

**TH-A 4'-8'**

**P408103-01 (Solid)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics by EPA 8021** | | | | | | | | | |
| Benzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Toluene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Ethylbenzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| p,m-Xylene | ND | 0.10 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| o-Xylene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total Xylenes | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total BTEX | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| *Surrogate: Bromochlorobenzene* | | *104 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| *Surrogate: 1,3-Dichlorobenzene* | | *103 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 5.00 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 34.9 | mg/kg | 1 | 1435006 | 08/25/14 | 08/26/14 | EPA 8015D | |
| *Surrogate: Benzo[a]pyrene* | | *116 %* | | *50-200* | *1435006* | *08/25/14* | *08/26/14* | *EPA 8015D* | |
| **Cation/Anion Analysis** | | | | | | | | | |
| Chloride | ND | 9.88 | mg/kg | 1 | 1435007 | 08/26/14 | 08/26/14 | EPA 300.0 | |

Overhead Map ID: A



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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 27-Aug-14 14:41 |

**TH-B 4'-8'**

**P408103-02 (Solid)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics by EPA 8021** | | | | | | | | | |
| Benzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Toluene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Ethylbenzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| p,m-Xylene | ND | 0.10 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| o-Xylene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total Xylenes | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total BTEX | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| *Surrogate: Bromochlorobenzene* | | *104 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| *Surrogate: 1,3-Dichlorobenzene* | | *103 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 4.99 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 35.0 | mg/kg | 1 | 1435006 | 08/25/14 | 08/26/14 | EPA 8015D | |
| *Surrogate: Benzo[a]pyrene* | | *138 %* | | *50-200* | *1435006* | *08/25/14* | *08/26/14* | *EPA 8015D* | |
| **Cation/Anion Analysis** | | | | | | | | | |
| Chloride | ND | 9.84 | mg/kg | 1 | 1435007 | 08/26/14 | 08/26/14 | EPA 300.0 | |

Overhead Map ID: B



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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 27-Aug-14 14:41 |

**TH-C 4'-8'**

**P408103-03 (Solid)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics by EPA 8021** | | | | | | | | | |
| Benzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Toluene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Ethylbenzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| p,m-Xylene | ND | 0.10 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| o-Xylene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total Xylenes | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total BTEX | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| *Surrogate: 1,3-Dichlorobenzene* | | *94.1 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| *Surrogate: Bromochlorobenzene* | | *94.9 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 4.98 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 34.9 | mg/kg | 1 | 1435006 | 08/25/14 | 08/26/14 | EPA 8015D | |
| *Surrogate: Benzo[a]pyrene* | | *119 %* | | *50-200* | *1435006* | *08/25/14* | *08/26/14* | *EPA 8015D* | |
| **Cation/Anion Analysis** | | | | | | | | | |
| Chloride | ND | 9.92 | mg/kg | 1 | 1435007 | 08/26/14 | 08/26/14 | EPA 300.0 | |

Overhead Map ID: C



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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 27-Aug-14 14:41 |

**TH-D 4'-8'**

**P408103-04 (Solid)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics by EPA 8021** | | | | | | | | | |
| Benzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Toluene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Ethylbenzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| p,m-Xylene | ND | 0.10 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| o-Xylene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total Xylenes | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total BTEX | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| *Surrogate: Bromochlorobenzene* | | *101 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| *Surrogate: 1,3-Dichlorobenzene* | | *99.2 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 4.99 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 35.0 | mg/kg | 1 | 1435006 | 08/25/14 | 08/26/14 | EPA 8015D | |
| *Surrogate: Benzo[a]pyrene* | | *99.8 %* | | *50-200* | *1435006* | *08/25/14* | *08/26/14* | *EPA 8015D* | |
| **Cation/Anion Analysis** | | | | | | | | | |
| Chloride | **14.4** | 9.86 | mg/kg | 1 | 1435007 | 08/26/14 | 08/26/14 | EPA 300.0 | |

Overhead Map ID: D



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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 27-Aug-14 14:41 |

## TH-E 4'-8'

**P408103-05 (Solid)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics by EPA 8021** | | | | | | | | | |
| Benzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Toluene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Ethylbenzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| p,m-Xylene | ND | 0.10 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| o-Xylene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total Xylenes | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total BTEX | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| *Surrogate: 1,3-Dichlorobenzene* | | *102 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| *Surrogate: Bromochlorobenzene* | | *103 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 4.98 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 34.9 | mg/kg | 1 | 1435006 | 08/25/14 | 08/26/14 | EPA 8015D | |
| *Surrogate: Benzo[a]pyrene* | | *127 %* | | *50-200* | *1435006* | *08/25/14* | *08/26/14* | *EPA 8015D* | |
| **Cation/Anion Analysis** | | | | | | | | | |
| Chloride | **12.2** | 9.84 | mg/kg | 1 | 1435007 | 08/26/14 | 08/26/14 | EPA 300.0 | |

Overhead Map ID: E

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| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 27-Aug-14 14:41 |

## Overburden Backfill 10-pt

### P408103-06 (Solid)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics by EPA 8021** | | | | | | | | | |
| Benzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Toluene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Ethylbenzene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| p,m-Xylene | ND | 0.10 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| o-Xylene | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total Xylenes | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| Total BTEX | ND | 0.05 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8021B | |
| *Surrogate: Bromochlorobenzene* | | *99.1 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| *Surrogate: 1,3-Dichlorobenzene* | | *98.1 %* | | *50-150* | *1435004* | *08/25/14* | *08/26/14* | *EPA 8021B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 4.99 | mg/kg | 1 | 1435004 | 08/25/14 | 08/26/14 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 34.9 | mg/kg | 1 | 1435006 | 08/25/14 | 08/26/14 | EPA 8015D | |
| *Surrogate: Benzo[a]pyrene* | | *119 %* | | *50-200* | *1435006* | *08/25/14* | *08/26/14* | *EPA 8015D* | |
| **Cation/Anion Analysis** | | | | | | | | | |
| Chloride | ND | 9.96 | mg/kg | 1 | 1435007 | 08/26/14 | 08/26/14 | EPA 300.0 | |



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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 27-Aug-14 14:41 |

## Volatile Organics by EPA 8021 - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1435004 - Purge and Trap EPA 5030A** | | | | | | | | | | |
| **Blank (1435004-BLK1)** | | | | Prepared: 25-Aug-14 Analyzed: 26-Aug-14 | | | | | | |
| Benzene | ND | 0.05 | mg/kg | | | | | | | |
| Toluene | ND | 0.05 | " | | | | | | | |
| Ethylbenzene | ND | 0.05 | " | | | | | | | |
| p,m-Xylene | ND | 0.10 | " | | | | | | | |
| o-Xylene | ND | 0.05 | " | | | | | | | |
| Total Xylenes | ND | 0.05 | " | | | | | | | |
| Total BTEX | ND | 0.05 | " | | | | | | | |
| *Surrogate: 1,3-Dichlorobenzene* | *52.4* | | *ug/L* | *50.0* | | *105* | *50-150* | | | |
| *Surrogate: Bromochlorobenzene* | *52.1* | | " | *50.0* | | *104* | *50-150* | | | |
| **Duplicate (1435004-DUP1)** | **Source: P408099-01** | | | Prepared: 25-Aug-14 Analyzed: 26-Aug-14 | | | | | | |
| Benzene | ND | 0.05 | mg/kg | | ND | | | | 30 | |
| Toluene | ND | 0.05 | " | | ND | | | | 30 | |
| Ethylbenzene | ND | 0.05 | " | | ND | | | | 30 | |
| p,m-Xylene | ND | 0.10 | " | | ND | | | | 30 | |
| o-Xylene | ND | 0.05 | " | | ND | | | | 30 | |
| *Surrogate: 1,3-Dichlorobenzene* | *49.3* | | *ug/L* | *50.0* | | *98.6* | *50-150* | | | |
| *Surrogate: Bromochlorobenzene* | *47.7* | | " | *50.0* | | *95.5* | *50-150* | | | |
| **Matrix Spike (1435004-MS1)** | **Source: P408099-01** | | | Prepared: 25-Aug-14 Analyzed: 26-Aug-14 | | | | | | |
| Benzene | 47.6 | | ug/L | 50.0 | ND | 95.3 | 39-150 | | | |
| Toluene | 49.2 | | " | 50.0 | ND | 98.3 | 46-148 | | | |
| Ethylbenzene | 49.1 | | " | 50.0 | ND | 98.1 | 32-160 | | | |
| p,m-Xylene | 98.3 | | " | 100 | ND | 98.3 | 46-148 | | | |
| o-Xylene | 48.8 | | " | 50.0 | ND | 97.6 | 46-148 | | | |
| *Surrogate: 1,3-Dichlorobenzene* | *50.6* | | " | *50.0* | | *101* | *50-150* | | | |
| *Surrogate: Bromochlorobenzene* | *50.7* | | " | *50.0* | | *101* | *50-150* | | | |

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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 27-Aug-14 14:41 |

## Nonhalogenated Organics by 8015 - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1435004 - Purge and Trap EPA 5030A** | | | | | | | | | | |
| **Blank (1435004-BLK1)** | | | | Prepared: 25-Aug-14 Analyzed: 26-Aug-14 | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 4.99 | mg/kg | | | | | | | |
| **Duplicate (1435004-DUP1)** | | **Source: P408099-01** | | Prepared: 25-Aug-14 Analyzed: 26-Aug-14 | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 5.00 | mg/kg | | ND | | | | 30 | |
| **Matrix Spike (1435004-MS1)** | | **Source: P408099-01** | | Prepared: 25-Aug-14 Analyzed: 26-Aug-14 | | | | | | |
| Gasoline Range Organics (C6-C10) | 0.45 | | mg/L | 0.450 | ND | 99.1 | 75-125 | | | |

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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 27-Aug-14 14:41 |

## Nonhalogenated Organics by 8015 - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1435006 - DRO Extraction EPA 3550M** | | | | | | | | | | |
| **Blank (1435006-BLK1)** | | | | Prepared: 25-Aug-14 Analyzed: 26-Aug-14 | | | | | | |
| Diesel Range Organics (C10-C28) | ND | 24.9 | mg/kg | | | | | | | |
| *Surrogate: Benzo[a]pyrene* | *19.4* | | " | *20.0* | | *97.0* | *50-200* | | | |
| **LCS (1435006-BS1)** | | | | Prepared: 25-Aug-14 Analyzed: 26-Aug-14 | | | | | | |
| Diesel Range Organics (C10-C28) | 556 | 25.0 | mg/kg | 500 | | 111 | 38-132 | | | |
| *Surrogate: Benzo[a]pyrene* | *22.6* | | " | *20.0* | | *113* | *50-200* | | | |
| **Matrix Spike (1435006-MS1)** | **Source: P408092-01** | | | Prepared: 25-Aug-14 Analyzed: 26-Aug-14 | | | | | | |
| Diesel Range Organics (C10-C28) | 114000 | 173 | mg/kg | 2470 | 132000 | NR | 38-132 | | | E, SPK1 |
| *Surrogate: Benzo[a]pyrene* | *115* | | " | *98.9* | | *116* | *50-200* | | | |
| **Matrix Spike Dup (1435006-MSD1)** | **Source: P408092-01** | | | Prepared: 25-Aug-14 Analyzed: 26-Aug-14 | | | | | | |
| Diesel Range Organics (C10-C28) | 137000 | 169 | mg/kg | 2410 | 132000 | 231 | 38-132 | 18.6 | 20 | E, SPK1 |
| *Surrogate: Benzo[a]pyrene* | *77.2* | | " | *96.3* | | *80.1* | *50-200* | | | |

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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 27-Aug-14 14:41 |

## Cation/Anion Analysis - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1435007 - Anion Extraction EPA 300.0** | | | | | | | | | | |
| **Blank (1435007-BLK1)** | | | | Prepared & Analyzed: 26-Aug-14 | | | | | | |
| Chloride | ND | 9.86 | mg/kg | | | | | | | |
| **LCS (1435007-BS1)** | | | | Prepared & Analyzed: 26-Aug-14 | | | | | | |
| Chloride | 484 | 9.88 | mg/kg | 494 | | 98.1 | 90-110 | | | |
| **Matrix Spike (1435007-MS1)** | **Source: P408103-01** | | | Prepared & Analyzed: 26-Aug-14 | | | | | | |
| Chloride | 496 | 9.81 | mg/kg | 491 | ND | 101 | 80-120 | | | |
| **Matrix Spike Dup (1435007-MSD1)** | **Source: P408103-01** | | | Prepared & Analyzed: 26-Aug-14 | | | | | | |
| Chloride | 486 | 9.90 | mg/kg | 495 | ND | 98.1 | 80-120 | 2.23 | 20 | |



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# CHAIN OF CUSTODY RECORD

17362

| Client: | Project Name / Location: |
|---|---|
| BP AMERICA | GCU 185 |
| Email results to: jeffcblagg @ AOL.com<br>peace.jeffrey@BP.com | Sampler Name: J. BLAGG |
| Client Phone No.: 505-320-1183 | Client No.: 03143-0424 |

| Sample No./ Identification | Sample Date | Sample Time | Lab No. | No./Volume of Containers | Preservative $HNO_3$ | Preservative HCl | Preservative | TPH (Method 8015) | BTEX (Method 8021) | VOC (Method 8260) | RCRA 8 Metals | Cation / Anion | RCI | TCLP with H/P | CO Table 910-1 | TPH (418.1) | CHLORIDE | | | | Sample Cool | Sample Intact |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TH-A 4'-8' | 8/25/14 | 1425 | P408103-01 | 1 x 4oz | | | | x | x | | | | | | | | x | | | | ✓ | ✓ |
| TH-B 4'-8' | " | 1432 | P408103-02 | " | | | | x | x | | | | | | | | x | | | | ✓ | ✓ |
| TH-C 4'-8' | " | 1437 | P408103-03 | " | | | | x | x | | | | | | | | x | | | | ✓ | ✓ |
| TH-D 4'-8' | " | 1445 | P408103-04 | " | | | | x | x | | | | | | | | x | | | | ✓ | ✓ |
| TH-E 4'-8' | " | 1450 | P408103-05 | " | | | | x | x | | | | | | | | x | | | | ✓ | ✓ |
| OVERBURDEN BACKFILL 10-pt | " | 1454 | P408103-06 | " | | | | x | x | | | | | | | | x | | | | ✓ | ✓ |
| | | | | | | | | | | | BILL BP | | | | | | | | | | | |
| | | | | | | | | | | | RUSH | | | | | | | | | | | |

| Relinquished by: (Signature) | Date | Time | Received by: (Signature) | Date | Time |
|---|---|---|---|---|---|
| Jeff Blagg | 8/25/14 | 1556 | | 8/25/14 | 1556 |
| Relinquished by: (Signature) | | | Received by: (Signature) | | |

Sample Matrix
Soil ☒ Solid ☐ Sludge ☐ Aqueous ☐ Other ☐ _____

☐ Sample(s) dropped off after hours to secure drop off area.

7.3 9.1 9.4

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| | | | |
|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 28-Aug-14 14:06 |

## Analyical Report for Samples

| Client Sample ID | Lab Sample ID | Matrix | Sampled | Received | Container |
|---|---|---|---|---|---|
| TH-G @ 4'-8' | P408106-01A | Soil | 08/26/14 | 08/26/14 | Glass Jar, 4 oz. |
| TH-H @ 4'-8' | P408106-02A | Soil | 08/26/14 | 08/26/14 | Glass Jar, 4 oz. |
| TH-I @ 4'-8' | P408106-03A | Soil | 08/26/14 | 08/26/14 | Glass Jar, 4 oz. |



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| | | | |
|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 28-Aug-14 14:06 |

**TH-G @ 4'-8'**

**P408106-01 (Solid)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics by EPA 8021** | | | | | | | | | |
| Benzene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Toluene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Ethylbenzene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| p,m-Xylene | ND | 0.10 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| o-Xylene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Total Xylenes | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Total BTEX | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| *Surrogate: Bromochlorobenzene* | | *99.8 %* | | *50-150* | *1435015* | *08/27/14* | *08/27/14* | *EPA 8021B* | |
| *Surrogate: 1,3-Dichlorobenzene* | | *101 %* | | *50-150* | *1435015* | *08/27/14* | *08/27/14* | *EPA 8021B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 4.99 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 44.9 | mg/kg | 2 | 1435014 | 08/26/14 | 08/27/14 | EPA 8015D | |
| *Surrogate: Benzo[a]pyrene* | | *90.7 %* | | *50-200* | *1435014* | *08/26/14* | *08/27/14* | *EPA 8015D* | |
| **Cation/Anion Analysis** | | | | | | | | | |
| Chloride | ND | 9.76 | mg/kg | 1 | 1435017 | 08/27/14 | 08/27/14 | EPA 300.0 | |

Overhead Map ID: G



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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 28-Aug-14 14:06 |

**TH-H @ 4'-8'**

**P408106-02 (Solid)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics by EPA 8021** | | | | | | | | | |
| Benzene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Toluene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Ethylbenzene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| p,m-Xylene | ND | 0.10 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| o-Xylene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Total Xylenes | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Total BTEX | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| *Surrogate: Bromochlorobenzene* | | *99.2 %* | | *50-150* | *1435015* | *08/27/14* | *08/27/14* | *EPA 8021B* | |
| *Surrogate: 1,3-Dichlorobenzene* | | *98.2 %* | | *50-150* | *1435015* | *08/27/14* | *08/27/14* | *EPA 8021B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 4.98 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 39.9 | mg/kg | 2 | 1435014 | 08/26/14 | 08/27/14 | EPA 8015D | |
| *Surrogate: Benzo[a]pyrene* | | *81.7 %* | | *50-200* | *1435014* | *08/26/14* | *08/27/14* | *EPA 8015D* | |
| **Cation/Anion Analysis** | | | | | | | | | |
| Chloride | ND | 9.88 | mg/kg | 1 | 1435017 | 08/27/14 | 08/27/14 | EPA 300.0 | |

Overhead Map ID: H



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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 28-Aug-14 14:06 |

**TH-I @ 4'-8'**

**P408106-03 (Solid)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics by EPA 8021** | | | | | | | | | |
| Benzene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Toluene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Ethylbenzene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| p,m-Xylene | ND | 0.10 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| o-Xylene | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Total Xylenes | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| Total BTEX | ND | 0.05 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8021B | |
| *Surrogate: 1,3-Dichlorobenzene* | | *101 %* | | *50-150* | *1435015* | *08/27/14* | *08/27/14* | *EPA 8021B* | |
| *Surrogate: Bromochlorobenzene* | | *103 %* | | *50-150* | *1435015* | *08/27/14* | *08/27/14* | *EPA 8021B* | |
| **Nonhalogenated Organics by 8015** | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 4.98 | mg/kg | 1 | 1435015 | 08/27/14 | 08/27/14 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 44.9 | mg/kg | 2 | 1435014 | 08/26/14 | 08/27/14 | EPA 8015D | |
| *Surrogate: Benzo[a]pyrene* | | *90.9 %* | | *50-200* | *1435014* | *08/26/14* | *08/27/14* | *EPA 8015D* | |
| **Cation/Anion Analysis** | | | | | | | | | |
| Chloride | ND | 9.84 | mg/kg | 1 | 1435017 | 08/27/14 | 08/27/14 | EPA 300.0 | |

Overhead Map ID: I

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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 28-Aug-14 14:06 |

## Volatile Organics by EPA 8021 - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1435015 - Purge and Trap EPA 5030A** | | | | | | | | | | |
| **Blank (1435015-BLK1)** | | | | Prepared: 26-Aug-14 Analyzed: 27-Aug-14 | | | | | | |
| Benzene | ND | 0.05 | mg/kg | | | | | | | |
| Toluene | ND | 0.05 | " | | | | | | | |
| Ethylbenzene | ND | 0.05 | " | | | | | | | |
| p,m-Xylene | ND | 0.10 | " | | | | | | | |
| o-Xylene | ND | 0.05 | " | | | | | | | |
| Total Xylenes | ND | 0.05 | " | | | | | | | |
| Total BTEX | ND | 0.05 | " | | | | | | | |
| *Surrogate: 1,3-Dichlorobenzene* | *0.0468* | | " | *0.0500* | | *93.6* | *50-150* | | | |
| *Surrogate: Bromochlorobenzene* | *0.0485* | | " | *0.0500* | | *97.0* | *50-150* | | | |
| **Duplicate (1435015-DUP1)** | **Source: P408107-01** | | | Prepared: 26-Aug-14 Analyzed: 27-Aug-14 | | | | | | |
| Benzene | ND | 0.05 | mg/kg | | ND | | | | 30 | |
| Toluene | ND | 0.05 | " | | ND | | | | 30 | |
| Ethylbenzene | ND | 0.05 | " | | ND | | | | 30 | |
| p,m-Xylene | ND | 0.10 | " | | ND | | | | 30 | |
| o-Xylene | ND | 0.05 | " | | ND | | | | 30 | |
| *Surrogate: 1,3-Dichlorobenzene* | *0.0506* | | " | *0.0499* | | *101* | *50-150* | | | |
| *Surrogate: Bromochlorobenzene* | *0.0520* | | " | *0.0499* | | *104* | *50-150* | | | |
| **Matrix Spike (1435015-MS1)** | **Source: P408107-01** | | | Prepared: 26-Aug-14 Analyzed: 27-Aug-14 | | | | | | |
| Benzene | 49.7 | | ug/L | 50.0 | ND | 99.5 | 39-150 | | | |
| Toluene | 51.6 | | " | 50.0 | ND | 103 | 46-148 | | | |
| Ethylbenzene | 51.4 | | " | 50.0 | ND | 103 | 32-160 | | | |
| p,m-Xylene | 103 | | " | 100 | ND | 103 | 46-148 | | | |
| o-Xylene | 51.9 | | " | 50.0 | ND | 104 | 46-148 | | | |
| *Surrogate: 1,3-Dichlorobenzene* | *0.0510* | | *mg/kg* | *0.0499* | | *102* | *50-150* | | | |
| *Surrogate: Bromochlorobenzene* | *0.0525* | | " | *0.0499* | | *105* | *50-150* | | | |

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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 28-Aug-14 14:06 |

## Nonhalogenated Organics by 8015 - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1435014 - DRO Extraction EPA 3550M** | | | | | | | | | | |
| **Blank (1435014-BLK1)** | | | | Prepared: 26-Aug-14 Analyzed: 27-Aug-14 | | | | | | |
| Diesel Range Organics (C10-C28) | ND | 25.0 | mg/kg | | | | | | | |
| *Surrogate: Benzo[a]pyrene* | *16.9* | | " | *20.0* | | *84.5* | *50-200* | | | |
| **LCS (1435014-BS1)** | | | | Prepared: 26-Aug-14 Analyzed: 27-Aug-14 | | | | | | |
| Diesel Range Organics (C10-C28) | 474 | 24.9 | mg/kg | 499 | | 95.1 | 38-132 | | | |
| *Surrogate: Benzo[a]pyrene* | *18.5* | | " | *20.0* | | *92.5* | *50-200* | | | |
| **Matrix Spike (1435014-MS1)** | **Source: P408107-01** | | | Prepared: 26-Aug-14 Analyzed: 27-Aug-14 | | | | | | |
| Diesel Range Organics (C10-C28) | 506 | 25.0 | mg/kg | 499 | 25.7 | 96.2 | 38-132 | | | |
| *Surrogate: Benzo[a]pyrene* | *17.7* | | " | *20.0* | | *88.7* | *50-200* | | | |
| **Matrix Spike Dup (1435014-MSD1)** | **Source: P408107-01** | | | Prepared: 26-Aug-14 Analyzed: 27-Aug-14 | | | | | | |
| Diesel Range Organics (C10-C28) | 568 | 25.0 | mg/kg | 500 | 25.7 | 109 | 38-132 | 11.6 | 20 | |
| *Surrogate: Benzo[a]pyrene* | *19.1* | | " | *20.0* | | *95.4* | *50-200* | | | |



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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 28-Aug-14 14:06 |

## Nonhalogenated Organics by 8015 - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1435015 - Purge and Trap EPA 5030A** | | | | | | | | | | |
| **Blank (1435015-BLK1)** | | | | Prepared: 26-Aug-14 Analyzed: 27-Aug-14 | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 5.00 | mg/kg | | | | | | | |
| **Duplicate (1435015-DUP1)** | | **Source: P408107-01** | | Prepared: 26-Aug-14 Analyzed: 27-Aug-14 | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 4.99 | mg/kg | | ND | | | | 30 | |
| **Matrix Spike (1435015-MS1)** | | **Source: P408107-01** | | Prepared: 26-Aug-14 Analyzed: 27-Aug-14 | | | | | | |
| Gasoline Range Organics (C6-C10) | 0.48 | | mg/L | 0.450 | ND | 107 | 75-125 | | | |

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|---|---|---|---|
| BP America Production Co. | Project Name: | GCU 185 | |
| PO Box 22024 | Project Number: | 03143-0424 | **Reported:** |
| Tulsa OK, 74121-2024 | Project Manager: | Jeff Blagg | 28-Aug-14 14:06 |

## Cation/Anion Analysis - Quality Control

## Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1435017 - Anion Extraction EPA 300.0** | | | | | | | | | | |
| **Blank (1435017-BLK1)** | | | | Prepared & Analyzed: 27-Aug-14 | | | | | | |
| Chloride | ND | 9.97 | mg/kg | | | | | | | |
| **LCS (1435017-BS1)** | | | | Prepared & Analyzed: 27-Aug-14 | | | | | | |
| Chloride | 487 | 9.91 | mg/kg | 496 | | 98.3 | 90-110 | | | |
| **Matrix Spike (1435017-MS1)** | **Source: P408106-01** | | | Prepared & Analyzed: 27-Aug-14 | | | | | | |
| Chloride | 483 | 9.88 | mg/kg | 494 | ND | 97.7 | 80-120 | | | |
| **Matrix Spike Dup (1435017-MSD1)** | **Source: P408106-01** | | | Prepared & Analyzed: 27-Aug-14 | | | | | | |
| Chloride | 481 | 9.86 | mg/kg | 493 | ND | 97.5 | 80-120 | 0.452 | 20 | |



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# CHAIN OF CUSTODY RECORD

17366

| Client: | Project Name / Location: |
|---|---|
| BP AMERICA | GCU 185 |
| Email results to: jeffcbloyg@AOL.com peace.jeffrey@BP.com | Sampler Name: J. BLAGG |
| Client Phone No.: 505-320-1183 | Client No.: 03143-0424 |

| Sample No./ Identification | Sample Date | Sample Time | Lab No. | No./Volume of Containers | Preservative $HNO_3$ | Preservative HCl | Preservative | TPH (Method 8015) | BTEX (Method 8021) | VOC (Method 8260) | RCRA 8 Metals | Cation / Anion | RCI | TCLP with H/P | CO Table 910-1 | TPH (418.1) | CHLORIDE | | | | Sample Cool | Sample Intact |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TH-G @ 4'-8' | 8/26/14 | 1153 | P408106-01 | 1x40z | | | | X | X | | | | | | | | X | | | | X | X |
| TH-H @ 4'-8' | " | 1159 | P408106-02 | " | | | | X | X | | | | | | | | X | | | | X | X |
| TH-I @ 4'-8' | " | 1215 | P408106-03 | " | | | | X | X | | | | | | | | X | | | | X | X |
| | | | | | | | | | | RUSH Bill BP | | | | | | | | | | | | |

| Relinquished by: (Signature) | Date | Time | Received by: (Signature) | Date | Time |
|---|---|---|---|---|---|
| Jeff Bloyg | 8/26/14 | 1258 | Miriam Joe | 8/26/14 | 1258 |
| Relinquished by: (Signature) | | | Received by: (Signature) | | |

Sample Matrix
Soil ☒ Solid ☐ Sludge ☐ Aqueous ☐ Other ☐ _____

☐ Sample(s) dropped off after hours to secure drop off area.

10.1 13.3 T3 10.9

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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 03143-0952
Energy Minerals and Natural Resources

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

Form C-138
Revised August 1, 2011

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

# REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
BP America Production Co. 200 Energy Ct. Farmington, NM 87401 Aug 2014

2. **Originating Site:**
GCU 185

3. **Location of Material (Street Address, City, State or ULSTR):**
QRT/QRT: NW/NW Unit: D Section: 33 T28N R12W

4. **Source and Description of Waste:** hydrocarbon/condensate impacted soil from historical release on location

Estimated Volume _____ yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 280 yd³ / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Courtney Cochran, representative or authorized agent for BP America Production Company do hereby 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)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by 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)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

**GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS**

Courtney Cochran, representative for BP America Production Company authorize Envirotech to complete the required testing/sign the Generator Waste Testing Certification.

I, Kendra Rumong, representative for Envirotech, Inc do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:** Crossfire

**OCD Permitted Surface Waste Management Facility**

Name and Facility Permit #: Envirotech Inc. Soil Remediation Facility Permit # NM-01-0011

Address of Facility: #43 Road 7175, South of Bloomfield, NM.

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: Kendra Rumong TITLE: Waste Coordinator DATE: 8-25-14

SIGNATURE: Kendra Rumong TELEPHONE NO.: 505-632-0615