

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

JUL 08 2016

Form C-141  
Revised August 8, 2011

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: BP	Contact: Jeff Peace
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9479
Facility Name: Gallegos Canyon Unit 207E	Facility Type: Natural gas well
Surface Owner: Federal	Mineral Owner: Federal
API No. 3004511632	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County: San Juan
D	14	28N	12W	950	North	1,070	West	

Latitude 36.6668701 Longitude -108.0863876

**NATURE OF RELEASE**

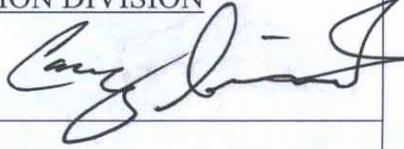
Type of Release: unknown	Volume of Release: unknown	Volume Recovered: none
Source of Release: below grade tank - 95 bbl	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: April 11, 2014 - 11:00 AM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <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.\* During the stripping of a well for recompletion, hydrocarbon impacts were discovered beneath a 95 bbl BGT. The impacts are believed to be historical and are likely impacts of a former earthen pit location. Bedrock sandstone was encountered at 8-12' below ground surface during the remedial excavation. The excavation was ceased due to production equipment in the vicinity.

Describe Area Affected and Cleanup Action Taken.\* The initial remedial excavation measured 15'x12'x6.5' deep. The excavation was advanced another 5 feet in all direction with a total of approximately 15 cubic yards of soil removed from the site. The remedial excavation was halted due to the recompleted well being put back into service. The remaining impacts were delineated via the advancement of 17 soil boring via hand auguring. 11 of the 17 soil borings were completed as in-situ, chemical injection points for the application of hydrogen peroxide. After the application of the hydrogen peroxide was complete, 5 additional soil borings were advance for confirmation laboratory samples. The confirmation samples demonstrated the effectiveness of the in-situ chemical treatment, with all results below the site closure standards. Field reports, site diagrams, photos and laboratory results are attached.

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

Signature: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Steve Moskal	Approved by Environmental Specialist: 	
Title: Field Environmental Coordinator	Approval Date: <u>8/19/16</u>	Expiration Date:
E-mail Address: steven.moskal@bp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: June 30, 2016	Phone: 505-326-9497	

\* Attach Additional Sheets If Necessary #NCS 1411151357

(64)

# BP America Production Company

Gallegos Canyon Unit 207E  
(D) Sec 14 – T28N – R12W  
API: 30-045-23897  
San Juan County, New Mexico

## Summary Record of Impacted Soil Remediation

March 31, 2014 Confirmation sampling conducted of the 95 barrel below-grade tank (BGT) following the approved New Mexico Oil Conservation Division's (NMOCD) bgt permit closure plan.

April 2, 2014 Lab report delivered to Blagg Engineering, Inc. (BEI). The following table below shows the 2010 NMOCD 19.15.17.13 NMAC (pit rule) closure constituents, testing methods, and standards (release verification). Lab results of the 5 point composite sample collected immediately below bgt bottom are shown in the far right column.

Constituents	Testing Method	Release Verification (mg/Kg)	95 BGT 5-pt.@ 6' (mg/Kg)
Benzene	US EPA Method SW-846 8021B or 8260B	0.2	< 0.24*
Total BTEX	US EPA Method SW-846 8021B or 8260B	50	10
TPH	US EPA Method SW-846 418.1	100	4,300
Chlorides	US EPA Method 300.0 or 4500B	250 or background	< 30

Notes: mg/Kg = milligram per kilogram, BTEX = benzene, toluene, ethylbenzene, and total xylenes, TPH = total petroleum hydrocarbons. \* - Lab Reporting Detection Limit value. Other EPA methods that the division approves may be applied to all constituents listed. Chloride closure standards will be determined by which ever concentration level is greatest.

In addition, it was requested by BEI to analyze the confirmation sample for TPH using US EPA Method 8015B. The results revealed total TPH = 2,330 mg/Kg, in which gasoline range organics (GRO) = 430 mg/Kg and Diesel Range Organics (DRO) = 1,900 mg/Kg.

June 17, 2014 Initiated site remediation by excavation with trackhoe. Evaluation of NMOCD's "Guidelines for Remediation of Leaks, Spills and Releases", dated August 13, 1993, for site ranking criteria indicated a closure standard of 1,000 mg/Kg for TPH based on groundwater depth estimated at greater than 100 feet from the known impacted soil vertical depth. Final dimensions of the excavation was 15 ft. x 12 ft. x 6-7.5 ft. depth.

June 20, 2014 Collection of soil & bedrock surface samples from excavation and additional lateral determination using hand auger. Lab report furnished revealed TPH using US EPA Method 8015B 2,600 mg/Kg from three (3) point composite sample of excavation bottom (sample ID: 3PC-EB @ 7.5' (95) and Non Detect at the Reporting Limits from four (4) point composite sample of excavation sidewalls (sample ID: 4PC-SW @ 3'-6' (95)).

June 24, 2014 Additional excavation of northeast perimeter extended approximately five (5) feet. Two (2) samples collected from sidewall [NE –SW @ 5' (95)] and bedrock [NE – SW @ 7' (95)]. Both samples were below applied closure standard (see Table 1 on following page). Final dimensions of impacted soil removed and replaced with imported clean soil was 15 ft. x 18 ft. x 1.5 ft. depth or approximately 15 cubic yards. Photos of excavation collected prior to backfilling with clean, imported soils.

June 26, 2014 Additional investigation in the northwest, west, southwest (between production tanks), and south of previous excavation. Impacts discovered at bedrock sandstone surface only (see Site Diagram – Figure 1).

May 9, 2016 Installation of seventeen (17) hand auger investigation points within remaining impact area located west of prior remedial excavation and east of 300 barrel stock tanks (see Figure 2). Each point terminated at the surface of dense sandstone located between 4.5' – 8.0' below surface grade. Points labeled as A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P&Q. Eleven (11) of the points (B,C,E,H,J,K,L,M,N,O&Q) selected for remediation of impacts via in-situ hydrogen peroxide treatment based on field OVM test results.

May 11, 2016 Concentrated hydrogen peroxide (34%) injected into each of the 11 selected treatment points, with 1 gallon used in each well.

May 13, 2016 Concentrated hydrogen peroxide (34%) injected into each of the 11 selected treatment points, with 1 gallon used in each well.

May 17, 2016 Concentrated hydrogen peroxide (34%) injected into each of the 11 selected treatment points, with 1 gallon used in each well.

May 20, 2016 Concentrated hydrogen peroxide (34%) injected into each of the 11 selected treatment points, with 1 gallon used in each well.

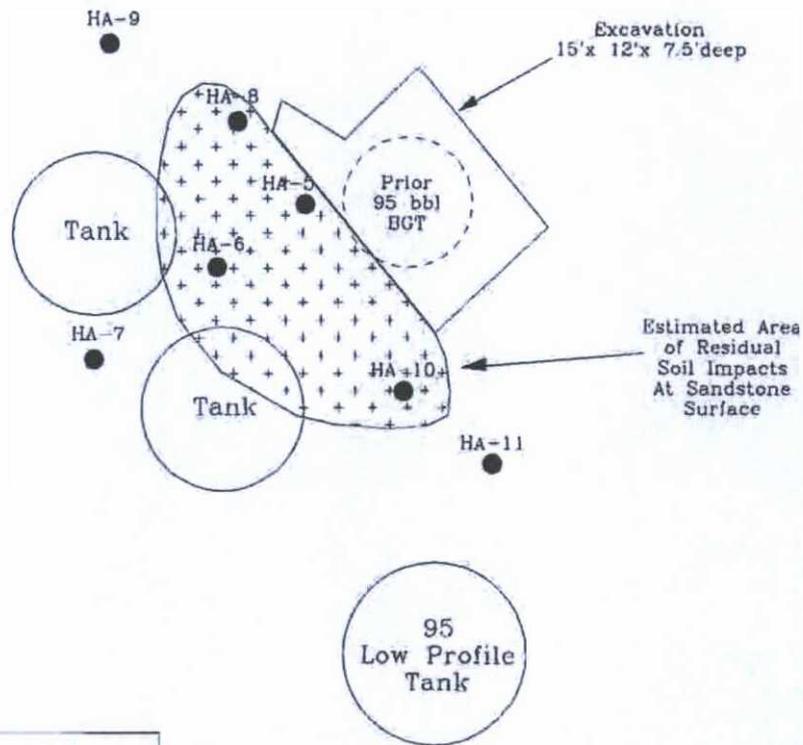
May 24, 2016 Concentrated hydrogen peroxide (34%) injected into each of the 11 selected treatment points, with 1 gallon used in each well.

June 16, 2016 Confirmation closure sampling collected from impacted zone by hand augering at five (5) separate and discrete locations. Sample points were selected with concurrence from on site NMOCD representative (see Figure 2). Points were labeled as HA-101, HA-102, HA-103, HA-104 and HA-105. Samples were submitted to Hall Environmental Laboratories for analysis of TPH by USEPA Method 8015D, BTEX by USEPA Method 8021B and chlorides by USEPA Method 300.0

June 28, 2016

Receive confirmation closure laboratory results from lab:

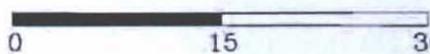
Sample ID	Sample Depth (feet)	Field OVM (ppm)	TPH (GRO) (mg/KG)	TPH (DRO) (mg/Kg)	TPH (GRO+DRO) (mg/Kg)	BTEX Total (mg/Kg)	Chloride (mg/Kg)
HA-101	4.0'-6.0'	520	21	770	791	ND	ND
HA-102	5.0'-6.9'	172	ND	390	390	ND	ND
HA-103	5.4'-7.3'	955	40	390	430	0.12	ND
HA-104	5.0'-5.8'	99	ND	65	65	ND	ND
HA-105	5.7'-7.1'	77	ND	540	540	ND	ND



Hand Auger ID	Depth of Sandstone Surface	TPH at Sand Stone
HA-5	7.1'	3,350 ppm
HA-6	6.0'	2,730 ppm
HA-7	4.0'	0.0 ppm
HA-8	6.6'	2,480 ppm
HA-9	6.0'	0.0 ppm
HA-10	5.7'	3,460 ppm
HA-11	4.5'	0.0 ppm

LEGEND


● HA-4 Sample Location


0      15      30 Feet

**Hydrogen Peroxide Treatment Points**

ID	Depth to Sandstone	OVM ppm at Sandstone
A	5.9'	2.0(Not Treated)
B	6.3'	157
C	7.5'	611
D	5.9'	41(Not Treated)
E	7.2'	63
F	5.5'	13.2(Not Treated)
G	4.5'	5.0(Not Treated)
H	6.8'	286
I	4.2'	3.1(Not Treated)
J	6.0'	213
K	6.4'	58
L	6.4'	122
M	6.3'	282
N	6.4'	69
O	8.0'	455
P	4.8'	8.5(Not Treated)
Q	7.1'	1,160

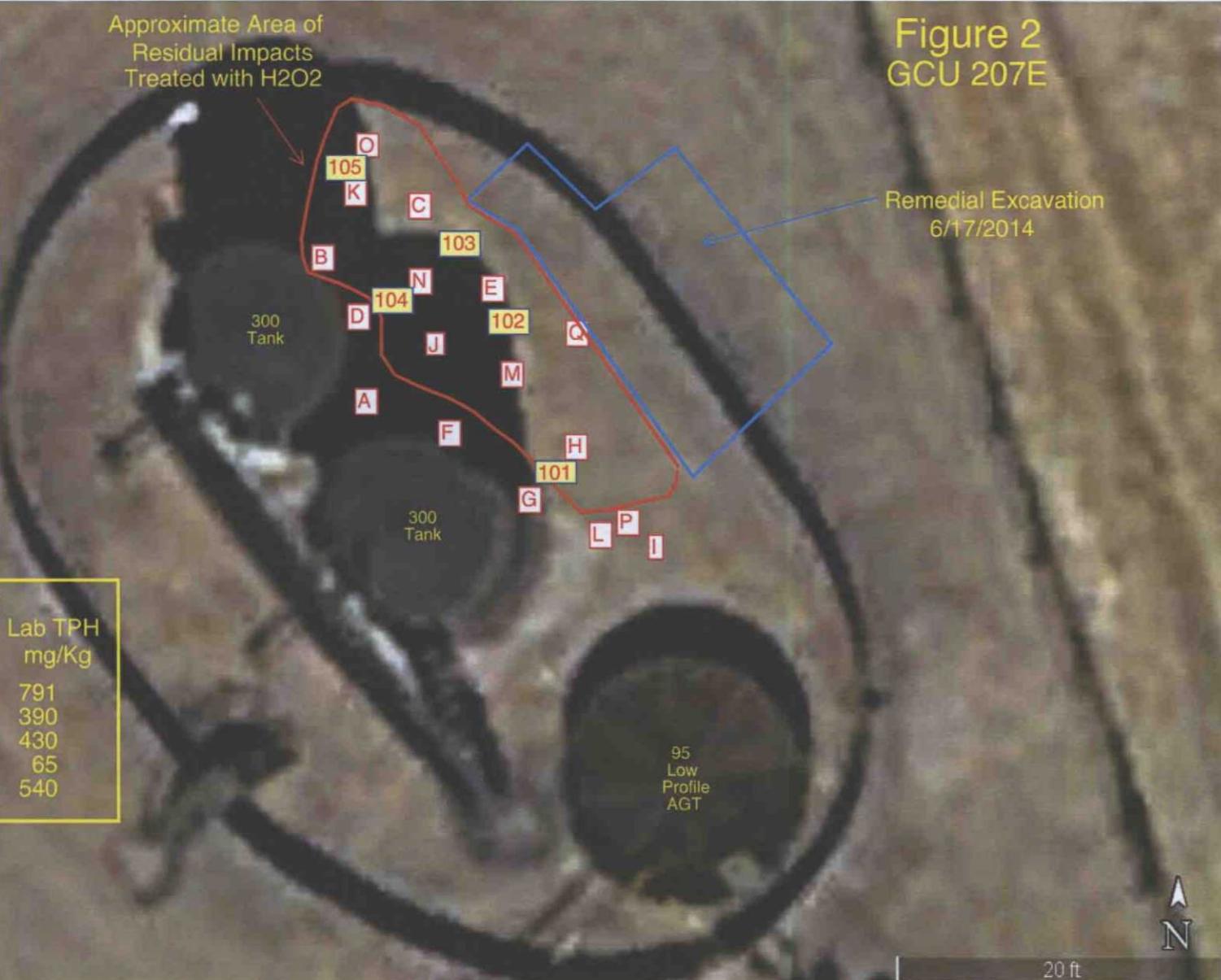
Approximate Area of Residual Impacts Treated with H2O2

**Figure 2**  
GCU 207E

Remedial Excavation 6/17/2014

**Confirmation Sample Points**

ID	Depth to Sandstone	Sample Interval	OVM (ppm)	Lab TPH mg/Kg
101	6.0'	4.0'-6.0'	520	791
102	6.9'	5.0'-6.9'	172	390
103	7.3'	5.4'-7.3'	955	430
104	5.8'	5.0'-5.8'	99	65
105	7.1'	5.7'-7.1'	77	540



# TABLE 1

## BP AMERICA PRODUCTION COMPANY GCU # 207E

Unit Letter D, Section 14, T28N, R12W - API Number: 30-045-23897  
(Cleanup & Post Cleanup Investigation of 95 barrel Below-grade Tank)

SAMPLE ID	SAMPLE DATE	SAMPLE TIME	SAMPLING COLLECTION	FIELD OVM READING (ppm)	TPH - cumulative (mg/Kg)	Benzene (mg/Kg)	BTEX - cumulative (mg/Kg)	Soil Description / Comments
HA1 @ 7.5' (95)	06/17/14	1106	GRAB	449	NA	NA	NA	Sample collected with hand auger, medium to dark gray soil immediately above bedrock sandstone
TH1 @ 8' (95)	06/17/14	1119	GRAB	99.5	256.7	ND	ND	Dark yellowish orange to olive gray (sample) sand to silty sand, bedrock sandstone at total depth
3PC-EB @ 7.5' (95)	06/20/14	0855	COMPOSITE	717	2,600	ND	8.9	Excavation bottom composite sample, bedrock sandstone, varying shades of gray
4PC-SW @ 3'-6' (95)	06/20/14	0905	COMPOSITE	0.0	ND	ND	ND	Excavation sidewall composite sample, dark yellowish orange sand to silty sand
HA3 @ 7' (95)	06/20/14	0930	GRAB	461	NA	NA	NA	Sample collected with hand auger, medium to dark gray soil immediately above bedrock sandstone
HA4 @ 5.75' (95)	06/20/14	0958	GRAB	1.4	ND	ND	ND	Sample collected with hand auger, dark yellowish to pale yellowish orange sand to silty sand
NE - SW @ 5' (95)	06/24/14	0957	GRAB	4.6	ND	ND	ND	Excavation sidewall sample, dark yellowish orange sand to silty sand
NE - SW @ 7' (95)	06/24/14	0858	GRAB	263	469	ND	0.82	Excavation sidewall sample consisting of bedrock sandstone, olive gray
HA-5 @ 7.1-7.6'	06/26/14	1340	GRAB	354	3,350	ND	2.2	Sample collected with hand auger, bedrock sandstone surface @ 7.1' below grade
HA-6 @ 6.0-7.2'	06/26/14	1405	GRAB	488	2,730	ND	25	Sample collected with hand auger, bedrock sandstone surface @ 6.0' below grade
HA-7 @ 4.0-4.4'	06/26/14	1415	GRAB	2.8	ND	ND	ND	Sample collected with hand auger, bedrock sandstone surface @ 4.0' below grade
HA-8 @ 6.6-7.7'	06/26/14	1435	GRAB	265	2,480	ND	1.1	Sample collected with hand auger, bedrock sandstone surface @ 6.6' below grade
HA-9 @ 6.0-7.1'	06/26/14	1457	GRAB	1.9	ND	ND	ND	Sample collected with hand auger, bedrock sandstone surface @ 6.0' below grade
HA-10 @ 5.7-6.4'	06/26/14	1514	GRAB	487	3,460	ND	2.1	Sample collected with hand auger, bedrock sandstone surface @ 5.7' below grade
HA-11 @ 4.5-5.2'	06/26/14	1526	GRAB	1.1	ND	ND	ND	Sample collected with hand auger, bedrock sandstone surface @ 4.5' below grade

NMOC Release Closure Standards (soils) -

100	1,000	10	50
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Notes:

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

NMOC Release Closure Standards Reference: "Guidelines for Remediation of Leaks, Spills and Releases" dated: August 13, 1993.

OVM Calibration: RESPONSE FACTOR = 0.52 or 1.00, CALIBRATION GAS - 100 ppm ISOBUTYLENE.

OVM Calibration Data

DATE	TIME	READING
06/17/14	1132	52.5
06/20/14	0915	52.3

DATE	TIME	READING
06/24/14	1005	52.1
06/26/14	0650	52.2

CLIENT: **BP** **BLAGG ENGINEERING, INC.**  
**P.O. BOX 87, BLOOMFIELD, NM 87413**  
**(505) 632-1199** API #: **3004523897**  
TANK ID (if applicable): **A**

**FIELD REPORT:** (circle one): BGT CONFIRMATION / RELEASE INVESTIGATION  OTHER:   
**REMEDATION OF 95 SW/DB BGT - INITIALLY SAMPLED ON 03/31/14** PAGE #: **1** of **1**

**SITE INFORMATION:** SITE NAME: **GCU # 207E** DATE STARTED: **06/17/14**  
QUAD/UNIT: **D** SEC: **14** TWP: **28N** RNG: **12W** PM: **NM** CNTY: **SJ** ST: **NM** DATE FINISHED:  
1/4 -1/4 FOOTAGE: **950'N / 1,070'W** **NW/NW** LEASE TYPE:  FEDERAL / STATE / FEE / INDIAN  
LEASE #: **SF078905** PROD. FORMATION: **DK** CONTRACTOR: **CROSSFIRE MBF - F. ARAGON** ENVIRONMENTAL SPECIALIST(S): **JCB**

**REFERENCE POINT:** WELL HEAD (W.H.) GPS COORD.: **36.66689 X 108.08651** GL ELEV.: **5,702'**  
1) **95 BGT (SW/DB)** GPS COORD.: **36.66718 X 108.08597** DISTANCE/BEARING FROM W.H.: **182', N55E**  
2) GPS COORD.: DISTANCE/BEARING FROM W.H.:  
3) GPS COORD.: DISTANCE/BEARING FROM W.H.:  
4) GPS COORD.: DISTANCE/BEARING FROM W.H.:

**SAMPLING DATA:** CHAIN OF CUSTODY RECORD(S) # OR LAB USED: **HALL** OVM READING (ppm)

1) SAMPLE ID: <b>HA1 @ 7.5' (95)</b>	SAMPLE DATE: <b>06/17/14</b>	SAMPLE TIME: <b>1106</b>	LAB ANALYSIS: <b>NA</b>	<b>449</b>
2) SAMPLE ID: <b>TH1 @ 8' (95)</b>	SAMPLE DATE: <b>06/17/14</b>	SAMPLE TIME: <b>1119</b>	LAB ANALYSIS: <b>8015B / 8021B / 300.0 (CI)</b>	<b>99.5</b>
3) SAMPLE ID:	SAMPLE DATE:	SAMPLE TIME:	LAB ANALYSIS:	
4) SAMPLE ID:	SAMPLE DATE:	SAMPLE TIME:	LAB ANALYSIS:	

**SOIL DESCRIPTION:** SOIL TYPE:  SAND / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL  OTHER: **BEDROCK SANDSTONE @ 7'-7.5' BELOW GRADE - VERY HARD, COMPETENT.**  
SOIL COLOR: **MOSTLY DARK YELLOWISH ORANGE** PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC  
COHESION (ALL OTHERS): NON COHESIVE  SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD  
CONSISTENCY (NON COHESIVE SOILS): LOOSE  FIRM / DENSE / VERY DENSE HC ODOR DETECTED:  YES / NO EXPLANATION - **STRONG FROM OBVIOUS DISCOLORED**  
MOISTURE: DRY  SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED **SOIL NEAR & WITHIN BEDROCK, SLIGHTLY WITHIN SAMPLE FROM TH1.**  
SAMPLE TYPE:  GRAB / COMPOSITE - # OF PTS. **NA** ANY AREAS DISPLAYING WETNESS: YES /  NO EXPLANATION -  
DISCOLORATION/STAINING OBSERVED:  YES / NO EXPLANATION - **VARYING SHADES OF GRAY BETWEEN 6 - 7.5 FEET BELOW GRADE.**

**SITE OBSERVATIONS:** LOST INTEGRITY OF EQUIPMENT: YES /  NO EXPLANATION -  
APPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED:  YES / NO EXPLANATION: **DISCOLORATION AND HYDROCARBON ODOR.**  
EQUIPMENT SET OVER RECLAIMED AREA: YES /  NO EXPLANATION -  
OTHER: **SIDEWALLS CONTAIN IMPACTED SOIL APPROX. 1 FT. THICK AT BOTTOMS WITHIN NE, SW, & NW AREA ONLY. TEST HOLE ADVANCED DID NOT REVEAL ANY DISCOLORATION. HAND AUGER (HA) BORINGS SPACED 3 FT. APART & FROM EXCAVATION PERIMETERS. 4 GALLONS H2O2 SPREAD THROUGHOUT EXCAVATION BOTTOM.**  
SOIL IMPACT DIMENSION ESTIMATION: **15** ft. X **18** ft. X **1.5** ft. IMPACTED SOIL ESTIMATION (Cubic Yards): **15**  
DEPTH TO GROUNDWATER: **>100'** NEAREST WATER SOURCE: **>1,000'** NEAREST SURFACE WATER: **<1,000'** NMOCD TPH CLOSURE STD: **1,000** ppm

**SITE SKETCH**  BGT Located: off / on site PLOT PLAN circle: attached

**OFF-SITE SURFACE DRAINAGE DIRECTION**  
**EXCAVATION PERIMETER** ~ 15 ft. X 12 ft. X 7.5 ft. depth Impact interval @ 6' - 7.5'  
**NE-SW** (2 ft. beyond HA4 & from fence)  
**Additional 5 ft. Excavation extended on 06/24/14**  
**BEDROCK SANDSTONE @ 6.5' - 7.5' BELOW GRADE.**  
**PERIMETER SECURITY FENCE**  
**LOW PROFILE ABOVE-GRADE TANK**  
**SEPARATOR**  
**PROD. TANKS**  
**PBGTL T.B. ~ 6' B.G.**  
**NE-SW (2 ft. beyond HA4 & from fence)**  
**Additional 5 ft. Excavation extended on 06/24/14**  
**BEDROCK SANDSTONE @ 6.5' - 7.5' BELOW GRADE.**  
**PERIMETER SECURITY FENCE**  
**LOW PROFILE ABOVE-GRADE TANK**  
**SEPARATOR**

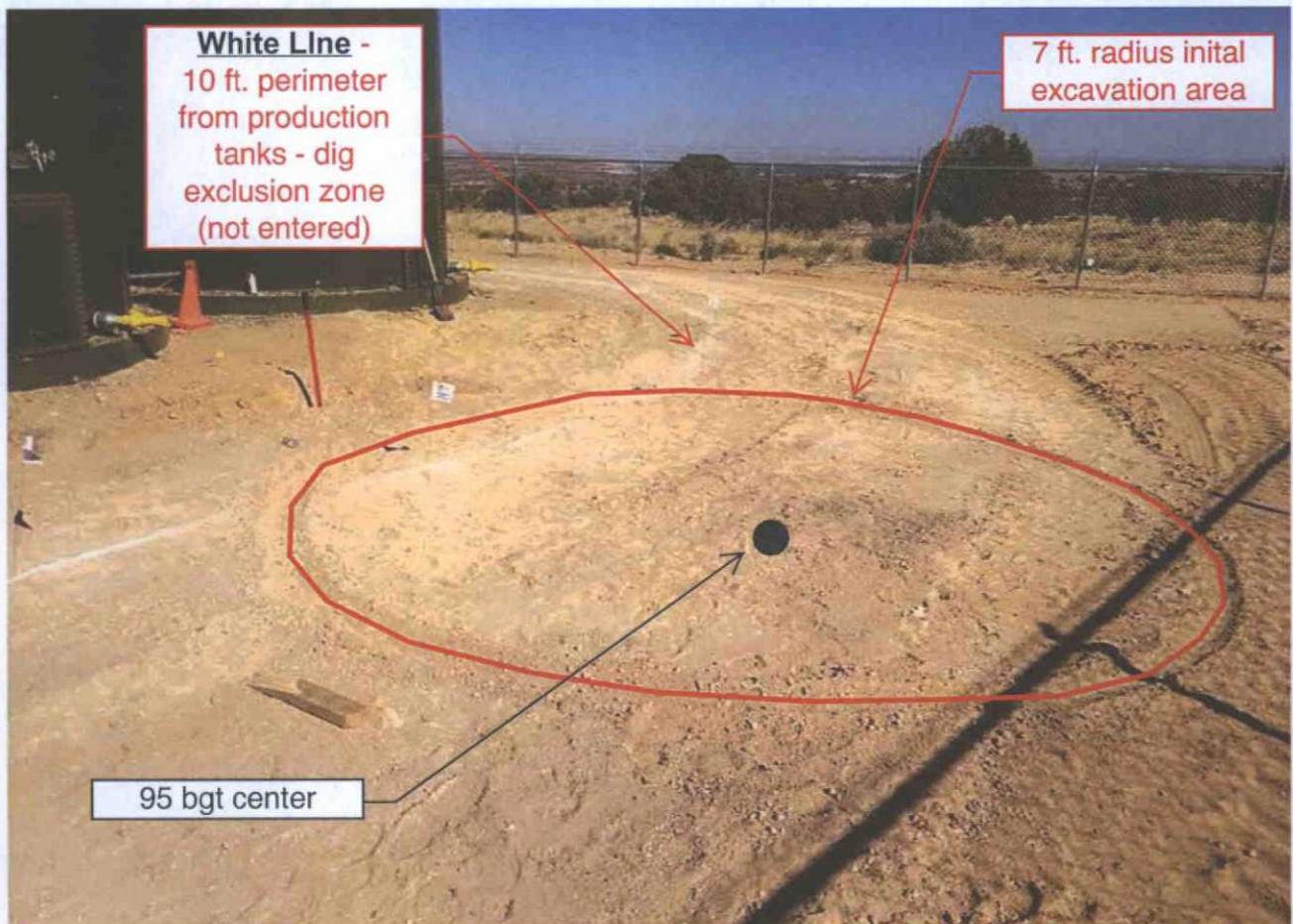
Sample ID	Date	Time	OVM
3PC-EB @ 7.5' (95)	06/20/14	0855	717
4PC-SW @ 3' - 6' (95)	06/20/14	0910	0.0
HA3 @ 7' (95)	06/20/14	0930	461
HA4 @ 5.75' (95)	06/20/14	0958	1.4
NE-SW @ 5' (95)	06/24/14	0957	4.6
NE-SW @ 7' (95)	06/24/14	0958	263

OVM CALIB. READ. = **52.3** ppm RF = 0.52  
OVM CALIB. GAS = **100** ppm  
TIME: **9:15** am DATE: **06/20/14**

OVM CALIB. READ. = **52.1** ppm RF = 0.52  
OVM CALIB. GAS = **100** ppm  
TIME: **10:05** am DATE: **06/24/14**

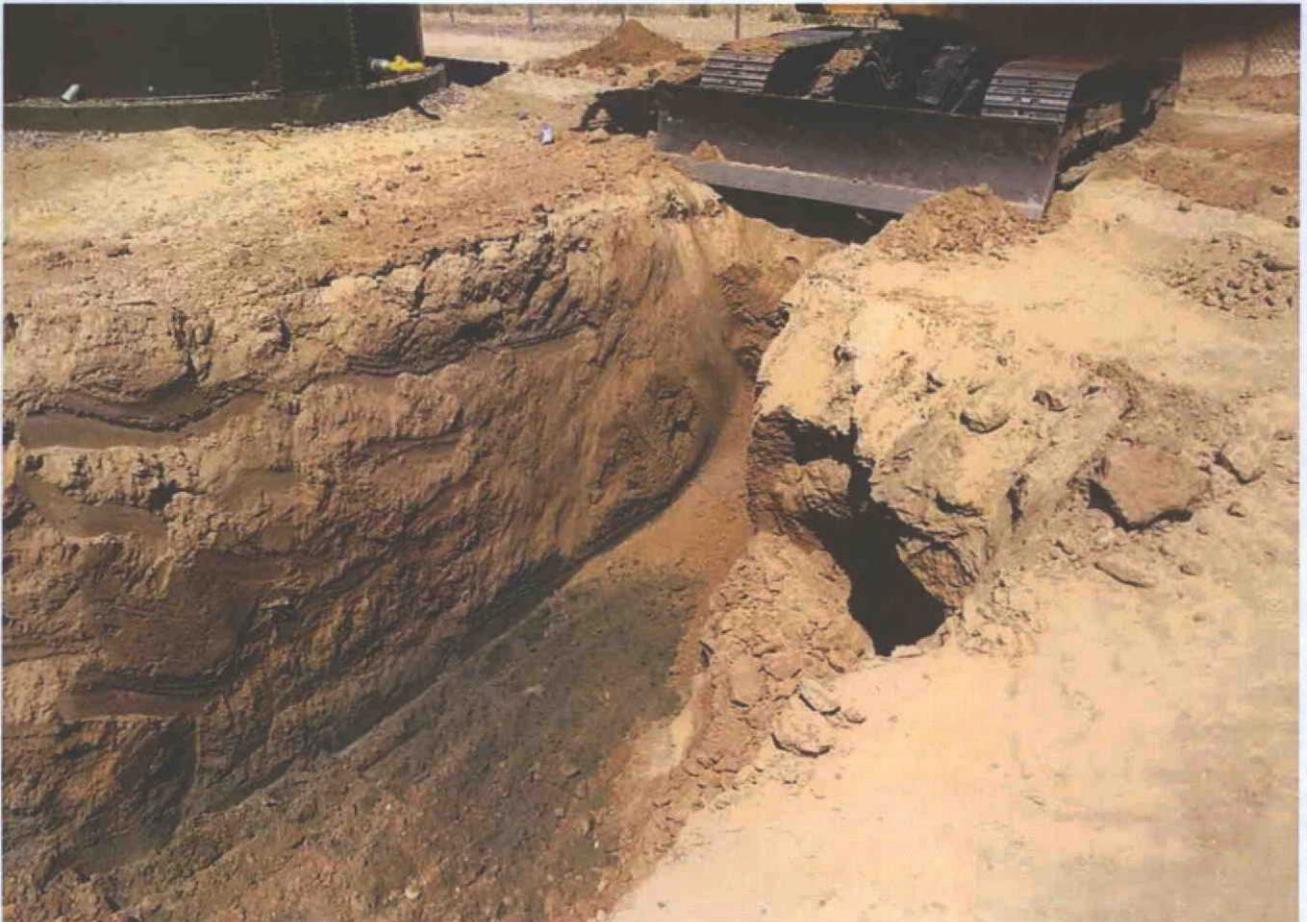
**MISCELL. NOTES**  
WO: **N15464952**  
PO #:  
PK: **ZDCS01GEN1**  
PJ #:  
Permit date(s):  
OCD Appr. date(s):  
Tank ID: OVM = Organic Vapor Meter ppm = parts per million  
BGT Sidewalls Visible: Y / N  
BGT Sidewalls Visible: Y / N  
BGT Sidewalls Visible: Y / N  
Magnetic declination: **10° E**

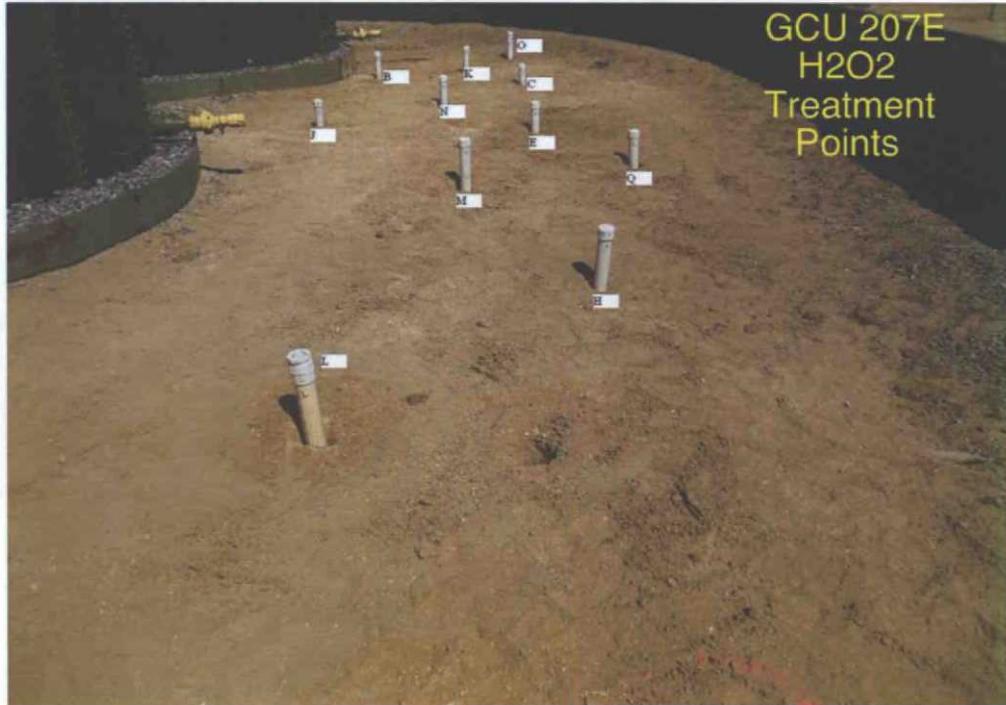
NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION DEPRESSION; B.G. = BELOW GRADE; B = BELOW; T.H. = TEST HOLE; ~ = APPROX.; W.H. = WELL HEAD; T.B. = TANK BOTTOM; PBGTL = PREVIOUS BELOW-GRADE TANK LOCATION; SPD = SAMPLE POINT DESIGNATION; R.W. = RETAINING WALL; NA - NOT APPLICABLE OR NOT AVAILABLE; SW - SINGLE WALL; DW - DOUBLE WALL; SB - SINGLE BOTTOM; DB - DOUBLE BOTTOM.  
NOTES: **GOOGLE EARTH IMAGERY DATE: 11/17/2013.** ONSITE: **06/17/14, 06/20/14, 06/24/14**











GCU 207E  
H<sub>2</sub>O<sub>2</sub>  
Treatment  
Points



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

June 20, 2014

Nelson Velez  
Blagg Engineering  
P. O. Box 87  
Bloomfield, NM 87413  
TEL: (505) 320-3489  
FAX

RE: GCU # 207 E

OrderNo.: 1406820

Dear Nelson Velez:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/18/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report

Lab Order 1406820

Date Reported: 6/20/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TH1 @ 8' (95)

Project: GCU # 207 E

Collection Date: 6/17/2014 11:19:00 AM

Lab ID: 1406820-001

Matrix: MEOH (SOIL)

Received Date: 6/18/2014 7:40:00 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)	250	10		mg/Kg	1	6/18/2014 1:35:48 PM	13755
Surr: DNOP	98.7	57.9-140		%REC	1	6/18/2014 1:35:48 PM	13755
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	6.7	4.3		mg/Kg	1	6/18/2014 12:44:38 PM	R19352
Surr: BFB	91.1	80-120		%REC	1	6/18/2014 12:44:38 PM	R19352
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.043		mg/Kg	1	6/18/2014 12:44:38 PM	R19352
Toluene	ND	0.043		mg/Kg	1	6/18/2014 12:44:38 PM	R19352
Ethylbenzene	ND	0.043		mg/Kg	1	6/18/2014 12:44:38 PM	R19352
Xylenes, Total	ND	0.086		mg/Kg	1	6/18/2014 12:44:38 PM	R19352
Surr: 4-Bromofluorobenzene	116	80-120		%REC	1	6/18/2014 12:44:38 PM	R19352

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than 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#: 1406820

20-Jun-14

Client: Blagg Engineering

Project: GCU # 207 E

Sample ID	MB-13755	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	13755	RunNo:	19341					
Prep Date:	6/18/2014	Analysis Date:	6/18/2014	SeqNo:	559117	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	8.4		10.00		84.0	57.9	140			

Sample ID	LCS-13755	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	13755	RunNo:	19341					
Prep Date:	6/18/2014	Analysis Date:	6/18/2014	SeqNo:	559118	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.5	60.8	145			
Surr: DNOP	4.3		5.000		85.2	57.9	140			

## Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1406820  
20-Jun-14

**Client:** Blagg Engineering  
**Project:** GCU # 207 E

Sample ID	<b>MB-13743 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19352</b>	RunNo:	<b>19352</b>					
Prep Date:		Analysis Date:	<b>6/18/2014</b>	SeqNo:	<b>559936</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		89.0	80	120			

Sample ID	<b>LCS-13743 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19352</b>	RunNo:	<b>19352</b>					
Prep Date:		Analysis Date:	<b>6/18/2014</b>	SeqNo:	<b>559937</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.6	71.7	134			
Surr: BFB	1100		1000		106	80	120			

Sample ID	<b>MB-13743</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13743</b>	RunNo:	<b>19352</b>					
Prep Date:	<b>6/17/2014</b>	Analysis Date:	<b>6/18/2014</b>	SeqNo:	<b>559944</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	890		1000		89.0	80	120			

Sample ID	<b>LCS-13743</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13743</b>	RunNo:	<b>19352</b>					
Prep Date:	<b>6/17/2014</b>	Analysis Date:	<b>6/18/2014</b>	SeqNo:	<b>559946</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		106	80	120			

**Qualifiers:**

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406820

20-Jun-14

Client: Blagg Engineering

Project: GCU # 207 E

Sample ID	<b>MB-13743 MK</b>		SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>PBS</b>		Batch ID: <b>R19352</b>	RunNo: <b>19352</b>						
Prep Date:			Analysis Date: <b>6/18/2014</b>	SeqNo: <b>559977</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	1.0		1.000		102	80	120			

Sample ID	<b>LCS-13743 MK</b>		SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>LCSS</b>		Batch ID: <b>R19352</b>	RunNo: <b>19352</b>						
Prep Date:			Analysis Date: <b>6/18/2014</b>	SeqNo: <b>559979</b>	Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.050	1.000	0	96.1	80	120			
Toluene	0.94	0.050	1.000	0	93.5	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.4	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.7	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

Sample ID	<b>MB-13743</b>		SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>PBS</b>		Batch ID: <b>13743</b>	RunNo: <b>19352</b>						
Prep Date: <b>6/17/2014</b>			Analysis Date: <b>6/18/2014</b>	SeqNo: <b>559985</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		102	80	120			

Sample ID	<b>LCS-13743</b>		SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>LCSS</b>		Batch ID: <b>13743</b>	RunNo: <b>19352</b>						
Prep Date: <b>6/17/2014</b>			Analysis Date: <b>6/18/2014</b>	SeqNo: <b>559986</b>	Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

**Qualifiers:**

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

**Sample Log-In Check List**

Client Name: **BLAGG**

Work Order Number: **1406820**

RcptNo: **1**

Received by/date:

*[Signature]* **6/18/14**

Logged By: **Lindsay Mangin**

**6/18/2014 7:40:00 AM**

*[Signature]*

Completed By: **Lindsay Mangin**

**6/18/2014 8:25:54 AM**

*[Signature]*

Reviewed By:

*[Signature]* **06/18/14**

**Chain of Custody**

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

**Log In**

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No  # 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? Yes  No  Checked by:
- (If no, notify customer for authorization.)

**Special Handling (if applicable)**

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

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

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

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)

Standard     Rush    **SAME DAY**

Project Name: **GCU # 207E**

Project #:

Project Manager: **NELSON VELEZ**

Sampler: **NELSON VELEZ**

On Ice:  Yes     No

Sample Temperature: **2.1**



**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

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

**Analysis Request**

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TPH (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / Aroclor)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 / water - 300.1)	Grab sample	5 pt. composite sample
6/17/14	1119	SOIL	TH1 @ 8' (95)	4 oz. - 1	Cool	406820 -001	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>	

Date: **6/17/14** Time: **1535** Relinquished by: *[Signature]*

Date: **6/17/14** Time: **1725** Relinquished by: *[Signature]*

Received by: *[Signature]* Date: **6/17/14** Time: **1535**

Received by: *[Signature]* Date: **06/18/14** Time: **0740**

Remarks:  
**BILL DIRECTLY TO BP:**  
 Jeff Peace, 200 Energy Court, Farmington, NM 87401  
 Work Order: N15464952 Paykey: ZDCS01GEN1

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 identified.



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

June 25, 2014

Nelson Velez  
Blagg Engineering  
P. O. Box 87  
Bloomfield, NM 87413  
TEL: (505) 320-3489  
FAX

RE: GCU #207E

OrderNo.: 1406A00

Dear Nelson Velez:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/21/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink that reads "John Caldwell". The signature is written in a cursive style with a large, prominent "J" and "C".

John Caldwell  
Supervisor  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report

Lab Order 1406A00

Date Reported: 6/25/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: 3PC-EB @ 7.5' (95)

Project: GCU #207E

Collection Date: 6/20/2014 8:55:00 AM

Lab ID: 1406A00-001

Matrix: MEOH (SOIL)

Received Date: 6/21/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	2100	98		mg/Kg	10	6/23/2014 11:33:05 AM	13833
Surr: DNOP	0	57.9-140	S	%REC	10	6/23/2014 11:33:05 AM	13833
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	500	44		mg/Kg	10	6/23/2014 12:29:29 PM	R19437
Surr: BFB	397	80-120	S	%REC	10	6/23/2014 12:29:29 PM	R19437
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.22		mg/Kg	10	6/23/2014 12:29:29 PM	R19437
Toluene	ND	0.44		mg/Kg	10	6/23/2014 12:29:29 PM	R19437
Ethylbenzene	2.3	0.44		mg/Kg	10	6/23/2014 12:29:29 PM	R19437
Xylenes, Total	6.6	0.87		mg/Kg	10	6/23/2014 12:29:29 PM	R19437
Surr: 4-Bromofluorobenzene	145	80-120	S	%REC	10	6/23/2014 12:29:29 PM	R19437
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	6/23/2014 12:39:14 PM	13840

3 point composite sample from excavation bottom  
(medium to dark gray in color)

TPH = 2,600 mg/Kg  
total BTEX = 8.9 mg/Kg

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

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

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: 4PC-SW @ 3'-6' (95)

Project: GCU #207E

Collection Date: 6/20/2014 9:05:00 AM

Lab ID: 1406A00-002

Matrix: MEOH (SOIL)

Received Date: 6/21/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/23/2014 12:03:14 PM	13833
Surr: DNOP	86.6	57.9-140		%REC	1	6/23/2014 12:03:14 PM	13833
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/23/2014 11:29:11 AM	R19437
Surr: BFB	90.6	80-120		%REC	1	6/23/2014 11:29:11 AM	R19437
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.047		mg/Kg	1	6/23/2014 11:29:11 AM	R19437
Toluene	ND	0.047		mg/Kg	1	6/23/2014 11:29:11 AM	R19437
Ethylbenzene	ND	0.047		mg/Kg	1	6/23/2014 11:29:11 AM	R19437
Xylenes, Total	ND	0.095		mg/Kg	1	6/23/2014 11:29:11 AM	R19437
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	6/23/2014 11:29:11 AM	R19437
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	6/23/2014 12:14:24 PM	13840

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		

Analytical Report

Lab Order 1406A00

Date Reported: 6/25/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: HA4 @ 5.75' (95)

Project: GCU #207E

Collection Date: 6/20/2014 9:58:00 AM

Lab ID: 1406A00-003

Matrix: MEOH (SOIL)

Received Date: 6/21/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/25/2014 4:22:36 PM	13833
Surr: DNOP	79.5	57.9-140		%REC	1	6/25/2014 4:22:36 PM	13833
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.1		mg/Kg	1	6/23/2014 11:59:21 AM	R19437
Surr: BFB	91.1	80-120		%REC	1	6/23/2014 11:59:21 AM	R19437
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.051		mg/Kg	1	6/23/2014 11:59:21 AM	R19437
Toluene	ND	0.051		mg/Kg	1	6/23/2014 11:59:21 AM	R19437
Ethylbenzene	ND	0.051		mg/Kg	1	6/23/2014 11:59:21 AM	R19437
Xylenes, Total	ND	0.10		mg/Kg	1	6/23/2014 11:59:21 AM	R19437
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	6/23/2014 11:59:21 AM	R19437
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	6/23/2014 12:26:49 PM	13840

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than 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#: 1406A00  
 26-Jun-14

**Client:** Blagg Engineering  
**Project:** GCU #207E

Sample ID	<b>MB-13840</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13840</b>	RunNo:	<b>19468</b>					
Prep Date:	<b>6/23/2014</b>	Analysis Date:	<b>6/23/2014</b>	SeqNo:	<b>563225</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	<b>LCS-13840</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13840</b>	RunNo:	<b>19468</b>					
Prep Date:	<b>6/23/2014</b>	Analysis Date:	<b>6/23/2014</b>	SeqNo:	<b>563226</b>	Units:	<b>mg/Kg</b>			
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 greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1406A00

26-Jun-14

**Client:** Blagg Engineering

**Project:** GCU #207E

Sample ID	<b>MB-13833</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13833</b>	RunNo:	<b>19428</b>					
Prep Date:	<b>6/23/2014</b>	Analysis Date:	<b>6/23/2014</b>	SeqNo:	<b>561973</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.5		10.00		75.3	57.9	140			

Sample ID	<b>LCS-13833</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13833</b>	RunNo:	<b>19428</b>					
Prep Date:	<b>6/23/2014</b>	Analysis Date:	<b>6/23/2014</b>	SeqNo:	<b>561976</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.3	68.6	130			
Surr: DNOP	3.6		5.000		72.8	57.9	140			

Sample ID	<b>MB-13809</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13809</b>	RunNo:	<b>19464</b>					
Prep Date:	<b>6/20/2014</b>	Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563212</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.1		10.00		81.1	57.9	140			

Sample ID	<b>LCS-13809</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13809</b>	RunNo:	<b>19464</b>					
Prep Date:	<b>6/20/2014</b>	Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563213</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.8		5.000		76.7	57.9	140			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1406A00  
26-Jun-14

Client: Blagg Engineering  
Project: GCU #207E

Sample ID	<b>MB-13820 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19437</b>	RunNo:	<b>19437</b>					
Prep Date:		Analysis Date:	<b>6/23/2014</b>	SeqNo:	<b>562664</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	970		1000		97.1	80	120			

Sample ID	<b>LCS-13820 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19437</b>	RunNo:	<b>19437</b>					
Prep Date:		Analysis Date:	<b>6/23/2014</b>	SeqNo:	<b>562665</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.5	71.7	134			
Surr: BFB	980		1000		98.2	80	120			

Sample ID	<b>1406A00-002AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>4PC-SW @ 3'-6' (95)</b>	Batch ID:	<b>R19437</b>	RunNo:	<b>19437</b>					
Prep Date:		Analysis Date:	<b>6/23/2014</b>	SeqNo:	<b>562668</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.7	23.70	0	80.7	71.8	132			
Surr: BFB	970		947.9		102	80	120			

### Qualifiers:

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

**QC SUMMARY REPORT**  
**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1406A00  
 26-Jun-14

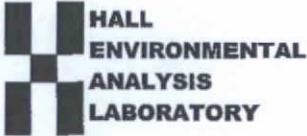
**Client:** Blagg Engineering  
**Project:** GCU #207E

Sample ID	<b>MB-13820 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19437</b>	RunNo:	<b>19437</b>					
Prep Date:		Analysis Date:	<b>6/23/2014</b>	SeqNo:	<b>562691</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	1.1		1.000		115	80	120			

Sample ID	<b>LCS-13820 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19437</b>	RunNo:	<b>19437</b>					
Prep Date:		Analysis Date:	<b>6/23/2014</b>	SeqNo:	<b>562692</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.050	1.000	0	97.8	80	120			
Toluene	0.96	0.050	1.000	0	96.0	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.5	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.5	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.7	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



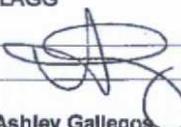
Hall Environmental Analysis Laboratory  
 4901 Hawkins NE  
 Albuquerque, NM 87109  
 TEL: 505-345-3975 FAX: 505-345-4107  
 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: **BLAGG**

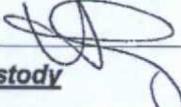
Work Order Number: 1406A00

RcptNo: 1

Received by/date:  06/21/2014

Logged By: **Ashley Gallegos** 6/21/2014 10:00:00 AM 

Completed By: **Ashley Gallegos** 6/21/2014 10:24:37 AM 

Reviewed By:  06/21/2014

**Chain of Custody**

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

**Log In**

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

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

**Special Handling (if applicable)**

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

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

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

# 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) \_\_\_\_\_

Project Name: \_\_\_\_\_

**GCU # 207E**

Project #:

Project Manager:  
**NELSON VELEZ**

Sampler: **NELSON VELEZ**

On Ice:  Yes     No

Sample Temperature: **21**



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TPH (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / Aroclor)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 / water - 300.1)	Grab sample	# of pts. composite sample
6/20/14	0855	SOIL	3PC - EB @ 7.5' (95)	4 oz. - 1	Cool	14060A00 -001	✓	✓										✓		3
6/20/14	0905	SOIL	4PC - SW @ 3' - 6' (95)	4 oz. - 1	Cool	-002	✓	✓										✓		4
6/20/14	0958	SOIL	HA4 @ 5.75' (95)	4 oz. - 1	Cool	-003	✓	✓										✓	✓	

Date: 6/20/14 Time: 1550 Relinquished by: *[Signature]*

Date: 6/20/14 Time: 1820 Relinquished by: *[Signature]*

Received by: *Christine Walters* Date: 6/20/14 Time: 1550

Received by: *[Signature]* Date: 06/21/14 Time: 16:00

Remarks:  
**BILL DIRECTLY TO BP:**  
 Jeff Peace, 200 Energy Court, Farmington, NM 87401  
 Work Order: N15464952 Paykey: ZDCS01GEN1

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



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

June 30, 2014

Nelson Velez  
Blagg Engineering  
P. O. Box 87  
Bloomfield, NM 87413  
TEL: (505) 320-3489  
FAX

RE: GCU # 207E

OrderNo.: 1406B24

Dear Nelson Velez:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/25/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Blagg Engineering

Client Sample ID: NE - SW @ 5' (95)

Project: GCU # 207E

Collection Date: 6/24/2014 9:57:00 AM

Lab ID: 1406B24-001

Matrix: MEOH (SOIL)

Received Date: 6/25/2014 8:10:00 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	6/25/2014 10:44:01 AM	13880
Surr: DNOP	89.6	57.9-140		%REC	1	6/25/2014 10:44:01 AM	13880
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/25/2014 10:08:26 AM	R19486
Surr: BFB	89.6	80-120		%REC	1	6/25/2014 10:08:26 AM	R19486
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.047		mg/Kg	1	6/25/2014 10:08:26 AM	R19486
Toluene	ND	0.047		mg/Kg	1	6/25/2014 10:08:26 AM	R19486
Ethylbenzene	ND	0.047		mg/Kg	1	6/25/2014 10:08:26 AM	R19486
Xylenes, Total	ND	0.093		mg/Kg	1	6/25/2014 10:08:26 AM	R19486
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	6/25/2014 10:08:26 AM	R19486
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	6/25/2014 11:46:38 AM	13886

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

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

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Blagg Engineering

Client Sample ID: NE - SW @ 7' (95)

Project: GCU # 207E

Collection Date: 6/24/2014 8:58:00 AM

Lab ID: 1406B24-002

Matrix: MEOH (SOIL)

Received Date: 6/25/2014 8:10:00 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)	410	10		mg/Kg	1	6/25/2014 12:00:09 PM	13880
Surr: DNOP	91.7	57.9-140		%REC	1	6/25/2014 12:00:09 PM	13880
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	59	4.4		mg/Kg	1	6/25/2014 10:38:35 AM	R19486
Surr: BFB	580	80-120	S	%REC	1	6/25/2014 10:38:35 AM	R19486
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.044		mg/Kg	1	6/25/2014 10:38:35 AM	R19486
Toluene	ND	0.044		mg/Kg	1	6/25/2014 10:38:35 AM	R19486
Ethylbenzene	0.10	0.044		mg/Kg	1	6/25/2014 10:38:35 AM	R19486
Xylenes, Total	0.72	0.088		mg/Kg	1	6/25/2014 10:38:35 AM	R19486
Surr: 4-Bromofluorobenzene	139	80-120	S	%REC	1	6/25/2014 10:38:35 AM	R19486
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	6/25/2014 11:59:03 AM	13886

Approx. 5 feet from northeast excavation perimeter  
& 2 feet from perimeter security fence  
(olive gray color - similar to TH1 in appearance)

TPH = 469 mg/Kg  
total BTEX = 0.82 mg/Kg

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#: 1406B24  
 30-Jun-14

**Client:** Blagg Engineering  
**Project:** GCU # 207E

Sample ID	<b>MB-13886</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13886</b>	RunNo:	<b>19526</b>					
Prep Date:	<b>6/25/2014</b>	Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>565224</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	<b>LCS-13886</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13886</b>	RunNo:	<b>19526</b>					
Prep Date:	<b>6/25/2014</b>	Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>565225</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	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 greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406B24

30-Jun-14

Client: Blagg Engineering

Project: GCU # 207E

Sample ID	<b>MB-13880</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13880</b>	RunNo:	<b>19466</b>					
Prep Date:	<b>6/25/2014</b>	Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>563896</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.4		10.00		84.2	57.9	140			

Sample ID	<b>LCS-13880</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13880</b>	RunNo:	<b>19466</b>					
Prep Date:	<b>6/25/2014</b>	Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>563897</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.5	68.6	130			
Surr: DNOP	4.1		5.000		82.5	57.9	140			

Sample ID	<b>1406B24-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>NE - SW @ 5' (95)</b>	Batch ID:	<b>13880</b>	RunNo:	<b>19466</b>					
Prep Date:	<b>6/25/2014</b>	Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>564017</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.9	49.36	0	95.5	40.1	152			
Surr: DNOP	4.3		4.936		87.9	57.9	140			

Sample ID	<b>1406B24-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>NE - SW @ 5' (95)</b>	Batch ID:	<b>13880</b>	RunNo:	<b>19466</b>					
Prep Date:	<b>6/25/2014</b>	Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>564032</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.40	0	101	40.1	152	7.25	32.1	
Surr: DNOP	4.7		5.040		94.0	57.9	140	0	0	

Sample ID	<b>MB-13913</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13913</b>	RunNo:	<b>19522</b>					
Prep Date:	<b>6/26/2014</b>	Analysis Date:	<b>6/26/2014</b>	SeqNo:	<b>565609</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.6		10.00		66.4	57.9	140			

Sample ID	<b>LCS-13913</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13913</b>	RunNo:	<b>19522</b>					
Prep Date:	<b>6/26/2014</b>	Analysis Date:	<b>6/26/2014</b>	SeqNo:	<b>565610</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.1		5.000		61.7	57.9	140			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1406B24  
30-Jun-14

Client: Blagg Engineering  
Project: GCU # 207E

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19486</b>	RunNo:	<b>19486</b>					
Prep Date:		Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>564552</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	840		1000		84.1	80	120			

Sample ID	<b>2.5UG GRO LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19486</b>	RunNo:	<b>19486</b>					
Prep Date:		Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>564553</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	71.7	134			
Surr: BFB	950		1000		95.2	80	120			

Sample ID	<b>1406B24-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>NE - SW @ 5' (95)</b>	Batch ID:	<b>R19486</b>	RunNo:	<b>19486</b>					
Prep Date:		Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>564555</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.30	0	96.9	71.8	132			
Surr: BFB	950		932.0		102	80	120			

Sample ID	<b>1406B24-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>NE - SW @ 5' (95)</b>	Batch ID:	<b>R19486</b>	RunNo:	<b>19486</b>					
Prep Date:		Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>564556</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.7	23.30	0	93.1	71.8	132	4.04	20	
Surr: BFB	890		932.0		96.0	80	120	0	0	

### Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than 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#: 1406B24

30-Jun-14

Client: Blagg Engineering

Project: GCU # 207E

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19486</b>	RunNo:	<b>19486</b>					
Prep Date:		Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>564562</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	0.91		1.000		90.7	80	120			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19486</b>	RunNo:	<b>19486</b>					
Prep Date:		Analysis Date:	<b>6/25/2014</b>	SeqNo:	<b>564563</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	106	80	120			
Toluene	1.0	0.050	1.000	0	104	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.3	0.10	3.000	0	110	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

**Qualifiers:**

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

**Sample Log-In Check List**

Client Name: **BLAGG**

Work Order Number: **1406B24**

RcptNo: **1**

Received by/date: *[Signature]* **06/25/14**  
 Logged By: **Lindsay Mangin** **6/25/2014 8:10:00 AM**  
 Completed By: **Lindsay Mangin** **6/25/2014 8:18:12 AM**  
 Reviewed By: **CS** **06/25/14**

*[Signature]*  
*[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° 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  # of preserved bottles checked for pH:
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes  No  Adjusted?  (<2 or >12 unless noted)
- 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  Checked by:

**Special Handling (if applicable)**

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

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.5	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) \_\_\_\_\_

Project Name: \_\_\_\_\_

**GCU # 207E**

Project #:

Project Manager: **NELSON VELEZ**

Sampler: **NELSON VELEZ**

On Ice:  Yes  No

Sample Temperature: 2.5



**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TPH (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO) (Method 418.1)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 / water - 300.1)	Grab sample	5 pt. composite sample	
6/24/14	0957	SOIL	NE - SW @ 5' (95)	4 oz. - 1	Cool	1400 BCL -001	✓	✓										✓	✓		
6/24/14	0958	SOIL	NE - SW @ 7' (95)	4 oz. - 1	Cool	-002	✓	✓										✓	✓		

Date: 6/24/14 Time: 1556 Relinquished by: [Signature]

Date: 6/24/14 Time: 1930 Relinquished by: Christen Waels

Received by: Christen Waels Date: 6/24/14 Time: 1556

Received by: [Signature] Date: 06/25/14 Time: 0810

Remarks:

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

Work Order: N15464952 Paykey: ZDCS01GEN1

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



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

July 07, 2014

Jeff Blagg  
Blagg Engineering  
P. O. Box 87  
Bloomfield, NM 87413  
TEL: (505) 320-1183  
FAX (505) 632-3903

RE: GCU 207E

OrderNo.: 1406D42

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 7 sample(s) on 6/28/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D42

Date Reported: 7/7/2014

CLIENT: Blagg Engineering

Client Sample ID: HA-5 @ 7.1'-7.6'

Project: GCU 207E

Collection Date: 6/26/2014 1:40:00 PM

Lab ID: 1406D42-001

Matrix: SOIL

Received Date: 6/28/2014 6:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	2900	100		mg/Kg	10	7/1/2014 10:33:45 AM	13968
Surr: DNOP	0	57.9-140	S	%REC	10	7/1/2014 10:33:45 AM	13968
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	450	25		mg/Kg	5	7/2/2014 12:47:16 AM	13966
Surr: BFB	864	80-120	S	%REC	5	7/2/2014 12:47:16 AM	13966
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.12		mg/Kg	5	7/2/2014 12:47:16 AM	13966
Toluene	ND	0.25		mg/Kg	5	7/2/2014 12:47:16 AM	13966
Ethylbenzene	ND	0.25		mg/Kg	5	7/2/2014 12:47:16 AM	13966
Xylenes, Total	2.2	0.49		mg/Kg	5	7/2/2014 12:47:16 AM	13966
Surr: 4-Bromofluorobenzene	132	80-120	S	%REC	5	7/2/2014 12:47:16 AM	13966
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	7/1/2014 12:57:17 PM	14002

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	

**Analytical Report**

Lab Order 1406D42

Date Reported: 7/7/2014

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Blagg Engineering

**Client Sample ID:** HA-6 @ 6.0'-7.2'

**Project:** GCU 207E

**Collection Date:** 6/26/2014 2:05:00 PM

**Lab ID:** 1406D42-002

**Matrix:** SOIL

**Received Date:** 6/28/2014 6:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	2200	99		mg/Kg	10	7/1/2014 11:04:35 AM	13968
Surr: DNOP	0	57.9-140	S	%REC	10	7/1/2014 11:04:35 AM	13968
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	530	23		mg/Kg	5	7/2/2014 1:15:53 AM	13966
Surr: BFB	883	80-120	S	%REC	5	7/2/2014 1:15:53 AM	13966
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.12		mg/Kg	5	7/2/2014 1:15:53 AM	13966
Toluene	ND	0.23		mg/Kg	5	7/2/2014 1:15:53 AM	13966
Ethylbenzene	ND	0.23		mg/Kg	5	7/2/2014 1:15:53 AM	13966
Xylenes, Total	25	0.47		mg/Kg	5	7/2/2014 1:15:53 AM	13966
Surr: 4-Bromofluorobenzene	167	80-120	S	%REC	5	7/2/2014 1:15:53 AM	13966
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	7/1/2014 1:59:21 PM	14002

Refer to the QC Summary report and sample login 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 11
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Blagg Engineering  
**Project:** GCU 207E  
**Lab ID:** 1406D42-003

**Matrix:** SOIL

**Client Sample ID:** HA-7 @ 4.0'-4.4'  
**Collection Date:** 6/26/2014 2:15:00 PM  
**Received Date:** 6/28/2014 6:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/30/2014 7:49:40 PM	13968
Surr: DNOP	84.5	57.9-140		%REC	1	6/30/2014 7:49:40 PM	13968
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/1/2014 5:38:09 PM	13966
Surr: BFB	96.8	80-120		%REC	1	7/1/2014 5:38:09 PM	13966
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	7/1/2014 5:38:09 PM	13966
Toluene	ND	0.048		mg/Kg	1	7/1/2014 5:38:09 PM	13966
Ethylbenzene	ND	0.048		mg/Kg	1	7/1/2014 5:38:09 PM	13966
Xylenes, Total	ND	0.095		mg/Kg	1	7/1/2014 5:38:09 PM	13966
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	7/1/2014 5:38:09 PM	13966
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	7/1/2014 2:11:46 PM	14002

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

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

**Analytical Report**

Lab Order 1406D42

Date Reported: 7/7/2014

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Blagg Engineering

**Client Sample ID:** HA-8 @ 6.6'-7.7'

**Project:** GCU 207E

**Collection Date:** 6/26/2014 2:35:00 PM

**Lab ID:** 1406D42-004

**Matrix:** SOIL

**Received Date:** 6/28/2014 6:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	2200	100		mg/Kg	10	7/1/2014 11:35:09 AM	13968
Surr: DNOP	0	57.9-140	S	%REC	10	7/1/2014 11:35:09 AM	13968
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	280	24		mg/Kg	5	7/2/2014 1:44:31 AM	13966
Surr: BFB	513	80-120	S	%REC	5	7/2/2014 1:44:31 AM	13966
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.12		mg/Kg	5	7/2/2014 1:44:31 AM	13966
Toluene	ND	0.24		mg/Kg	5	7/2/2014 1:44:31 AM	13966
Ethylbenzene	ND	0.24		mg/Kg	5	7/2/2014 1:44:31 AM	13966
Xylenes, Total	1.1	0.49		mg/Kg	5	7/2/2014 1:44:31 AM	13966
Surr: 4-Bromofluorobenzene	133	80-120	S	%REC	5	7/2/2014 1:44:31 AM	13966
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	7/1/2014 2:24:11 PM	14002

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	





Analytical Report

Lab Order 1406D42

Date Reported: 7/7/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: HA-11 @ 4.5'-5.2'

Project: GCU 207E

Collection Date: 6/26/2014 3:26:00 PM

Lab ID: 1406D42-007

Matrix: SOIL

Received Date: 6/28/2014 6:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/30/2014 9:51:00 PM	13968
Surr: DNOP	89.1	57.9-140		%REC	1	6/30/2014 9:51:00 PM	13968
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/1/2014 9:55:45 PM	13966
Surr: BFB	93.2	80-120		%REC	1	7/1/2014 9:55:45 PM	13966
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	7/1/2014 9:55:45 PM	13966
Toluene	ND	0.048		mg/Kg	1	7/1/2014 9:55:45 PM	13966
Ethylbenzene	ND	0.048		mg/Kg	1	7/1/2014 9:55:45 PM	13966
Xylenes, Total	ND	0.097		mg/Kg	1	7/1/2014 9:55:45 PM	13966
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	7/1/2014 9:55:45 PM	13966
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	7/1/2014 3:01:25 PM	14002

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 7 of 11
	O RSD is greater than 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#: 1406D42

07-Jul-14

Client: Blagg Engineering

Project: GCU 207E

Sample ID	MB-14002	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	14002	RunNo:	19637					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	569535	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-14002	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	14002	RunNo:	19637					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	569536	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 greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D42

07-Jul-14

Client: Blagg Engineering

Project: GCU 207E

Sample ID	MB-13968	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	13968	RunNo:	19585					
Prep Date:	6/30/2014	Analysis Date:	6/30/2014	SeqNo:	567719	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	7.2		10.00		72.1	57.9	140			

Sample ID	LCS-13968	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	13968	RunNo:	19585					
Prep Date:	6/30/2014	Analysis Date:	6/30/2014	SeqNo:	567720	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.6	68.6	130			
Surr: DNOP	3.4		5.000		68.8	57.9	140			

Sample ID	1406D41-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	13968	RunNo:	19585					
Prep Date:	6/30/2014	Analysis Date:	6/30/2014	SeqNo:	567721	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.30	0	98.2	40.1	152			
Surr: DNOP	3.6		5.030		71.4	57.9	140			

Sample ID	1406D41-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	13968	RunNo:	19585					
Prep Date:	6/30/2014	Analysis Date:	6/30/2014	SeqNo:	567722	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	49.95	0	111	40.1	152	11.7	32.1	
Surr: DNOP	3.9		4.995		78.8	57.9	140	0	0	

**Qualifiers:**

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

50

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D42

07-Jul-14

Client: Blagg Engineering

Project: GCU 207E

Sample ID	<b>MB-13966</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13966</b>	RunNo:	<b>19616</b>					
Prep Date:	<b>6/30/2014</b>	Analysis Date:	<b>7/1/2014</b>	SeqNo:	<b>568837</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	970		1000		97.4	80	120			

Sample ID	<b>LCS-13966</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13966</b>	RunNo:	<b>19616</b>					
Prep Date:	<b>6/30/2014</b>	Analysis Date:	<b>7/1/2014</b>	SeqNo:	<b>568838</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	114	71.7	134			
Surr: BFB	1100		1000		106	80	120			

Sample ID	<b>1406D41-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>13966</b>	RunNo:	<b>19616</b>					
Prep Date:	<b>6/30/2014</b>	Analysis Date:	<b>7/1/2014</b>	SeqNo:	<b>568844</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	32	4.9	24.53	0	130	71.8	132			
Surr: BFB	1200		981.4		118	80	120			

Sample ID	<b>1406D41-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>13966</b>	RunNo:	<b>19616</b>					
Prep Date:	<b>6/30/2014</b>	Analysis Date:	<b>7/1/2014</b>	SeqNo:	<b>568845</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.9	24.51	0	121	71.8	132	7.31	20	
Surr: BFB	1000		980.4		104	80	120	0	0	

**Qualifiers:**

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D42

07-Jul-14

Client: Blagg Engineering

Project: GCU 207E

Sample ID	<b>MB-13966</b>		SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>PBS</b>		Batch ID: <b>13966</b>	RunNo: <b>19616</b>						
Prep Date:	<b>6/30/2014</b>		Analysis Date: <b>7/1/2014</b>	SeqNo: <b>568870</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	1.1		1.000		110	80	120			

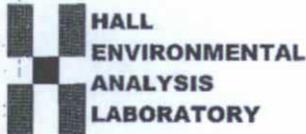
Sample ID	<b>LCS-13966</b>		SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>LCSS</b>		Batch ID: <b>13966</b>	RunNo: <b>19616</b>						
Prep Date:	<b>6/30/2014</b>		Analysis Date: <b>7/1/2014</b>	SeqNo: <b>568871</b>	Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	108	80	120			
Toluene	1.0	0.050	1.000	0	104	80	120			
Ethylbenzene	1.0	0.050	1.000	0	105	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		118	80	120			

Sample ID	<b>1406D41-002AMS</b>		SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>BatchQC</b>		Batch ID: <b>13966</b>	RunNo: <b>19616</b>						
Prep Date:	<b>6/30/2014</b>		Analysis Date: <b>7/1/2014</b>	SeqNo: <b>568878</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	0.9940	0	111	77.4	142			
Toluene	1.1	0.050	0.9940	0.007807	108	77	132			
Ethylbenzene	1.1	0.050	0.9940	0	110	77.6	134			
Xylenes, Total	3.3	0.099	2.982	0.01174	110	77.4	132			
Surr: 4-Bromofluorobenzene	1.1		0.9940		112	80	120			

Sample ID	<b>1406D41-002AMSD</b>		SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>BatchQC</b>		Batch ID: <b>13966</b>	RunNo: <b>19616</b>						
Prep Date:	<b>6/30/2014</b>		Analysis Date: <b>7/1/2014</b>	SeqNo: <b>568879</b>	Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.050	0.9970	0	117	77.4	142	5.34	20	
Toluene	1.1	0.050	0.9970	0.007807	112	77	132	3.98	20	
Ethylbenzene	1.2	0.050	0.9970	0	115	77.6	134	4.90	20	
Xylenes, Total	3.4	0.10	2.991	0.01174	114	77.4	132	3.48	20	
Surr: 4-Bromofluorobenzene	1.1		0.9970		112	80	120	0	0	

**Qualifiers:**

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



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: **1406D42**

RcptNo: **1**

Received by/date: *[Signature]* **06/28/14**  
 Logged By: **Lindsay Mangin** **6/28/2014 6:45:00 AM**  
 Completed By: **Lindsay Mangin** **6/28/2014 9:21:19 AM**  
 Reviewed By: *A* **06/30/14**

*[Signature]*  
*[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° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No  # 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? 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:

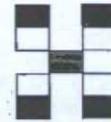
### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.2	Good	Yes			

# Chain-of-Custody Record

Client: BLAGG ENGINEERING INC  
BP AMERICA  
 Mailing Address: P.O. Box 87  
BLOOMFIELD NM 87413  
 Phone #: 505-320-1193  
 email or Fax#: \_\_\_\_\_  
 QA/QC Package:  
 Standard  Level 4 (Full Validation)  
 Accreditation  
 NELAP  Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Turn-Around Time: By WED July 2, 2014  
 Standard  Rush  
 Project Name: GCU 207E  
 Project #: \_\_\_\_\_  
 Project Manager: J. Blagg  
 Sampler: J. Blagg  
 On Ice:  Yes  No  
 Sample Temperature: 2.2



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TPB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / HAPs)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE	Air Bubbles (Y or N)
26/14	1340	SOIL	HA-5@7.1'-7.6'	4oz x 1	COOL	-001	X	X										X	
"	1405	"	HA-6@6.0'-7.2'	"	"	-002	X	X										X	
"	1415	"	HA-7@4.0'-4.4'	"	"	-003	X	X										X	
"	1435	"	HA-8@6.6'-7.7'	"	"	-004	X	X										X	
"	1457	"	HA-9@6.0'-7.1'	"	"	-005	X	X										X	
"	1514	"	HA-10@5.7'-6.4'	"	"	-006	X	X										X	
"	1526	"	HA-11@4.5'-5.2'	"	"	-007	X	X										X	

Date: 27/14 Time: 1300 Relinquished by: Jeff Blagg  
 Received by: [Signature] Date: 06/28/14 Time: 0445 Remarks: BILL BP  
PAYEE: ZDCSO1GEN1  
CONTACT: JEFF PEACE

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



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

June 28, 2016

Jeff Blagg  
Blagg Engineering  
P. O. Box 87  
Bloomfield, NM 87413  
TEL: (505) 632-1199  
FAX (505) 632-3903

RE: GCU 207E

OrderNo.: 1606A50

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/17/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report

Lab Order 1606A50

Date Reported: 6/28/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: HA-101(4.0'-6.0')

Project: GCU 207E

Collection Date: 6/16/2016 9:36:00 AM

Lab ID: 1606A50-001

Matrix: SOIL

Received Date: 6/17/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	6/22/2016 11:40:09 PM	26020
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	770	9.6		mg/Kg	1	6/23/2016 2:29:52 PM	25944
Surr: DNOP	101	70-130		%Rec	1	6/23/2016 2:29:52 PM	25944
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	21	9.9		mg/Kg	2	6/25/2016 6:53:02 PM	25945
Surr: BFB	201	80-120	S	%Rec	2	6/25/2016 6:53:02 PM	25945
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.050		mg/Kg	2	6/25/2016 6:53:02 PM	25945
Toluene	ND	0.099		mg/Kg	2	6/25/2016 6:53:02 PM	25945
Ethylbenzene	ND	0.099		mg/Kg	2	6/25/2016 6:53:02 PM	25945
Xylenes, Total	ND	0.20		mg/Kg	2	6/25/2016 6:53:02 PM	25945
Surr: 4-Bromofluorobenzene	97.9	80-120		%Rec	2	6/25/2016 6:53:02 PM	25945

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1606A50

Date Reported: 6/28/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: HA-102(5.0'-6.9')

Project: GCU 207E

Collection Date: 6/16/2016 9:47:00 AM

Lab ID: 1606A50-002

Matrix: SOIL

Received Date: 6/17/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	6/23/2016 12:42:13 AM	26020
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	390	9.3		mg/Kg	1	6/23/2016 3:19:43 PM	25944
Surr: DNOP	104	70-130		%Rec	1	6/23/2016 3:19:43 PM	25944
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/25/2016 5:41:18 AM	25945
Surr: BFB	131	80-120	S	%Rec	1	6/25/2016 5:41:18 AM	25945
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	6/25/2016 5:41:18 AM	25945
Toluene	ND	0.050		mg/Kg	1	6/25/2016 5:41:18 AM	25945
Ethylbenzene	ND	0.050		mg/Kg	1	6/25/2016 5:41:18 AM	25945
Xylenes, Total	ND	0.099		mg/Kg	1	6/25/2016 5:41:18 AM	25945
Surr: 4-Bromofluorobenzene	96.7	80-120		%Rec	1	6/25/2016 5:41:18 AM	25945

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1606A50

Date Reported: 6/28/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: HA-103(5.4'-7.3')

Project: GCU 207E

Collection Date: 6/16/2016 10:03:00 AM

Lab ID: 1606A50-003

Matrix: SOIL

Received Date: 6/17/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	6/23/2016 12:54:38 AM	26020
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	390	9.6		mg/Kg	1	6/23/2016 4:03:12 PM	25944
Surr: DNOP	99.7	70-130		%Rec	1	6/23/2016 4:03:12 PM	25944
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	40	4.8		mg/Kg	1	6/25/2016 6:04:44 AM	25945
Surr: BFB	706	80-120	S	%Rec	1	6/25/2016 6:04:44 AM	25945
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	6/25/2016 6:04:44 AM	25945
Toluene	ND	0.048		mg/Kg	1	6/25/2016 6:04:44 AM	25945
Ethylbenzene	ND	0.048		mg/Kg	1	6/25/2016 6:04:44 AM	25945
Xylenes, Total	0.12	0.096		mg/Kg	1	6/25/2016 6:04:44 AM	25945
Surr: 4-Bromofluorobenzene	113	80-120		%Rec	1	6/25/2016 6:04:44 AM	25945

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1606A50

Date Reported: 6/28/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: HA-104(5.0'-5.8')

Project: GCU 207E

Collection Date: 6/16/2016 10:16:00 AM

Lab ID: 1606A50-004

Matrix: SOIL

Received Date: 6/17/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	6/23/2016 1:07:02 AM	26020
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	65	9.6		mg/Kg	1	6/23/2016 3:14:10 PM	25944
Surr: DNOP	99.6	70-130		%Rec	1	6/23/2016 3:14:10 PM	25944
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/25/2016 6:28:13 AM	25945
Surr: BFB	115	80-120		%Rec	1	6/25/2016 6:28:13 AM	25945
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	6/25/2016 6:28:13 AM	25945
Toluene	ND	0.048		mg/Kg	1	6/25/2016 6:28:13 AM	25945
Ethylbenzene	ND	0.048		mg/Kg	1	6/25/2016 6:28:13 AM	25945
Xylenes, Total	ND	0.096		mg/Kg	1	6/25/2016 6:28:13 AM	25945
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	6/25/2016 6:28:13 AM	25945

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
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Blagg Engineering

Client Sample ID: HA-105(5.7'-7.1')

Project: GCU 207E

Collection Date: 6/16/2016 10:27:00 AM

Lab ID: 1606A50-005

Matrix: SOIL

Received Date: 6/17/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	6/23/2016 1:19:27 AM	26020
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	540	9.6		mg/Kg	1	6/23/2016 2:33:06 PM	25944
Surr: DNOP	108	70-130		%Rec	1	6/23/2016 2:33:06 PM	25944
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/25/2016 6:51:41 AM	25945
Surr: BFB	104	80-120		%Rec	1	6/25/2016 6:51:41 AM	25945
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	6/25/2016 6:51:41 AM	25945
Toluene	ND	0.048		mg/Kg	1	6/25/2016 6:51:41 AM	25945
Ethylbenzene	ND	0.048		mg/Kg	1	6/25/2016 6:51:41 AM	25945
Xylenes, Total	ND	0.096		mg/Kg	1	6/25/2016 6:51:41 AM	25945
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	6/25/2016 6:51:41 AM	25945

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
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606A50

28-Jun-16

Client: Blagg Engineering

Project: GCU 207E

Sample ID	MB-26020	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	26020	RunNo:	35114					
Prep Date:	6/22/2016	Analysis Date:	6/22/2016	SeqNo:	1086467	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-26020	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	26020	RunNo:	35114					
Prep Date:	6/22/2016	Analysis Date:	6/22/2016	SeqNo:	1086468	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606A50

28-Jun-16

Client: Blagg Engineering

Project: GCU 207E

Sample ID	<b>MB-25944</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>25944</b>	RunNo:	<b>35116</b>					
Prep Date:	<b>6/20/2016</b>	Analysis Date:	<b>6/23/2016</b>	SeqNo:	<b>1086562</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.8		10.00		88.1	70	130			

Sample ID	<b>LCS-25944</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>25944</b>	RunNo:	<b>35116</b>					
Prep Date:	<b>6/20/2016</b>	Analysis Date:	<b>6/23/2016</b>	SeqNo:	<b>1086657</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	10	50.00	0	75.2	62.6	124			
Surr: DNOP	4.4		5.000		87.1	70	130			

### Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606A50

28-Jun-16

**Client:** Blagg Engineering

**Project:** GCU 207E

Sample ID <b>MB-25945</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>25945</b>		RunNo: <b>35048</b>							
Prep Date: <b>6/20/2016</b>	Analysis Date: <b>6/21/2016</b>		SeqNo: <b>1084262</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		105	80	120			

Sample ID <b>LCS-25945 C</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>25945</b>		RunNo: <b>35048</b>							
Prep Date:	Analysis Date: <b>6/21/2016</b>		SeqNo: <b>1084263</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.4	80	120			
Surr: BFB	1200		1000		117	80	120			

Sample ID <b>5ML-RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R35158</b>		RunNo: <b>35158</b>							
Prep Date:	Analysis Date: <b>6/24/2016</b>		SeqNo: <b>1087655</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		97.3	80	120			

Sample ID <b>2.5NG GRO LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R35158</b>		RunNo: <b>35158</b>							
Prep Date:	Analysis Date: <b>6/24/2016</b>		SeqNo: <b>1088007</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		113	80	120			

Sample ID <b>LCS-26055</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>26055</b>		RunNo: <b>35174</b>							
Prep Date: <b>6/24/2016</b>	Analysis Date: <b>6/25/2016</b>		SeqNo: <b>1088117</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		107	80	120			

Sample ID <b>MB-26055</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>26055</b>		RunNo: <b>35174</b>							
Prep Date: <b>6/24/2016</b>	Analysis Date: <b>6/25/2016</b>		SeqNo: <b>1088118</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		97.4	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606A50

28-Jun-16

**Client:** Blagg Engineering

**Project:** GCU 207E

Sample ID	LCS-25945		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS		Batch ID:	25945		RunNo:	35158				
Prep Date:	6/20/2016		Analysis Date:	6/24/2016		SeqNo:	1088034		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.99	0.025	1.000	0	98.7	75.3	123				
Toluene	0.98	0.050	1.000	0	98.1	80	124				
Ethylbenzene	1.0	0.050	1.000	0	100	82.8	121				
Xylenes, Total	3.0	0.10	3.000	0	99.4	83.9	122				
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120				

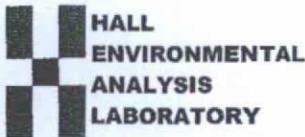
Sample ID	MB-25945		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS		Batch ID:	25945		RunNo:	35158				
Prep Date:	6/20/2016		Analysis Date:	6/25/2016		SeqNo:	1088035		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.025									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	0.95		1.000		95.4	80	120				

Sample ID	LCS-26055		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS		Batch ID:	26055		RunNo:	35174				
Prep Date:	6/24/2016		Analysis Date:	6/25/2016		SeqNo:	1088135		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120				

Sample ID	MB-26055		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS		Batch ID:	26055		RunNo:	35174				
Prep Date:	6/24/2016		Analysis Date:	6/25/2016		SeqNo:	1088136		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	0.94		1.000		94.4	80	120				

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



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: **1606A50**

RcptNo: **1**

Received by/date: **AT**

**06/17/16**

Logged By: **Lindsay Mangin**

**6/17/2016 7:45:00 AM**

*Lindsay Mangin*

Completed By: **Lindsay Mangin**

**6/20/2016 6:03:17 AM**

*Lindsay Mangin*

Reviewed By: **Jr**

**06/20/16**

**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	4.3	Good	Yes			

# Chain-of-Custody Record

Turn-Around Time:

Client: **BP AMERICA**

**BLAGG ENGINEERING**

Billing Address:

Phone #: **505-320-1183**

Mail or Fax#:

VQC Package:

Standard  Level 4 (Full Validation)

Creditation:

NELAP  Other \_\_\_\_\_

EDD (Type):

Standard  Rush

Project Name:

**GCU ZOTE**

Project #:

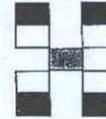
Project Manager:

**J. Blagg**

Sampler: **J. Blagg**

On Ice:  Yes  No

Sample Temperature: **43**



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TPH (Gas only)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE	Air Bubbles (Y or N)
6/26/06	0936	SOIL	HA-101(4.0'-6.0')	4oz x 1	COOL	16006A50 -001	X	X										X	
	0947	"	HA-102(5.0'-6.9')	"	"	-002	X	X										X	
	1003	"	HA-103(5.4'-7.3')	"	"	-003	X	X										X	
	1016	"	HA-104(5.0'-5.8')	"	"	-004	X	X										X	
	1027	"	HA-105(5.7'-7.1')	"	"	-005	X	X										X	

Relinquished by: **JH Blagg** Date: **06/17/06** Time: **0745**  
 Received by: **[Signature]**

Remarks: **BILL BP CONTACT: STEVE MOSCAL VID: VDRINKWJA1**

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.