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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Subsequent Report ☒ Final Report

Name of Company: BP	Contact: Steve Moskal
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-330-9179
Facility Name: Usselman Gas Com 001	Facility Type: Natural gas well

Surface Owner: Private	Mineral Owner: Private	API No. 3004511080

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County: San Juan
B	4	31N	10W	1,190	North	1,700	East	

OIL CONS. DIV DIST. 3

OCT 10 2017

Latitude 36.93117° **Longitude** -107.88425°

NATURE OF RELEASE

Type of Release: Unknown - hydrocarbon	Volume of Release: unknown	Volume Recovered: none
Source of Release: Unknown – suspect earthen pit; BGT and piping	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: December 11, 2014 11:41 AM
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom? Steve Moskal	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* During the closure of a below grade tank (Tank B) sampling indicated what appears to be hydrocarbon impacts to the soil, likely associated with an earthen pit. Groundwater was discovered at 5' below ground surface. A Geoprobe was used to delineate the site. Determined that the remaining impacts could be associated with a pipeline operator. Excavate known BP impacts

Describe Area Affected and Cleanup Action Taken.* BP excavated and removed approximately 2,210 cubic yards of soil that was transported off site for landfarm treatment. The areas surrounding Tank A and Tank B were included in this excavation. BP requests no further action at this time

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Steve Moskal	Approved by Environmental Specialist:	
Title: Field Environmental Coordinator	Approval Date: 11/16/17	Expiration Date:
E-mail Address: steven.moskal@bp.com	Conditions of Approval: —	Attached ☐
Date: September 18, 2017 Phone: 505-326-9497		

* Attach Additional Sheets If Necessary #NCS1501255135

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BP America: Usselman GC 1
(B) Sec 4 – T31N – R10W
San Juan County, New Mexico

Summary Record of Impact Remediation

December 11, 2014 Initial sampling of soils below 2 each 95 barrel below grade tanks (BGT's) for closure. Field evidence indicated that Tank A (west tank, on SW corner of well pad) would test clean, and that Tank B (east tank, on SE corner of well pad) would likely test above NMOCD closure standards. Note that both tanks originally permitted under the Wood GC A1 well, currently PxA'd, on the shared well pad with the Usselman GC 1. Review of the BGT permits indicated groundwater estimated at less than 25 feet from ground surface, and local terrain indicated groundwater could be less than 15 feet from ground surface. Site closure standard determined to be 100 ppm TPH.

December 12, 2014 Receive rush lab results and both BGT's failed on TPH (Tank A: TPH by USEPA 8015B = 246 ppm, Tank B: TPH by USEPA 8015B = 9,680 ppm). Initial report of failure made to NMOCD.

January 22 – 23, 2015 Conduct GeoProbe investigation of site to determine if BGT impacts extend off-site into the adjacent private pasture to the south. GeoProbe Points GP-2, GP-3, GP-4, GP-7, GP-8 and GP-9 determine that impacts from BGT releases do not extend south into the private pasture. GeoProbe Point GP-13 finds imported soils from ground surface to 12 foot depth, apparent area of prior remediation. GeoProbe Points GP-7, GP-8, GP-12 and GP-14 define exterior limits of this cleanup, with native soils and low TPH values. (Note: GeoProbe boring logs and laboratory reports, including TPH and BTEX analysis, are included herein).

March 26, 2015 Within NMOCD data base, discover September, 1994 record of El Paso Field Services remediation of pit located east of meter house in pasture. NMOCD signs off on closure, with residual TPH in soils = 7,830 ppm. Note that a monitor well placed within excavation (approximately 12'x12'x12' deep) tested 4 calendar quarters below NMOCD standards for BTEX.

Following subsequent review of the EPFS cleanup data, NMOCD states that BP is not responsible for cleanup of any commingled impacts exceeding 7,830 ppm TPH.

March 30, 2015 Complete remedial excavation of Tank B. Final excavation approximately 25' x 29' x 20' deep (soil volume 540 +/- CY). Final closure soil sampling data is presented in the following table:

Sample ID	Overhead Map ID	Sample Date	Peak Field OVM (ppm)	Lab TPH (8015D) (ppm)	Lab Benzene/Total BTEX (ppm)
1-3 PC @ 5'-15' (95-B)	1	3/27/2015	24	ND	ND/ND
2-3 PC @ 5'-15' (95-B)	2	3/27/2015	24	ND	ND/ND
3A-3PC@5'-15'(95-B)	3A	3/30/2015	3	ND	ND/ND
4-3 PC @ 5'-15' (95-B)	4	3/27/2015	72	ND	ND/ND

Note that the excavation extended into the water table (estimated at 16' below grade) and a monitor well will be installed at a future date.

April 2, 2015 Complete remedial excavation of Tank A. Final excavation approximately 50' x 45' x 20' deep (soil volume 1,670 +/- CY). Final closure soil sampling data is presented in the following table:

Sample ID	Overhead Map ID	Sample Date	Peak Field OVM (ppm)	Lab TPH (8015D) (ppm)	Lab Benzene/Total BTEX (ppm)
Tank A N Wall 3-pt Comp 5-15	A	4/1/2015	12	16	ND/ND
Tand A E Wall 3-pt Comp 5-15	B	4/1/2015	0	ND	ND/ND
S Wall-W 3-pt 5-15	C	4/2/2015	82	53	ND/ND
W Wall-S 3-pt 5-15	D	4/2/2015	6	ND	ND/ND
W Wall-N 3-pt 5-15	E	4/2/2015	0	ND	ND/ND
S Wall-E 3-pt 5-15	F	4/2/2015	22	140	ND/ND

Sample point F is within the commingled area with the El Paso unlined pit area, and further remediation by BP was not needed. Note also that the BP excavation extended into the water table (estimated at 16' below grade) and a monitor well will be installed at a future date.

April 8, 2015 Complete backfill operations at both BGT's.

BP AMERICA PRODUCTION COMPANY

Groundwater Quality Investigation

Wood Gas Com A 001 / Usselman Gas Com 001
API #: 30-045-07707 / 3004511080
Legal Description: (Unit Letter B, Sec. 4 -T31N -R10W, NMPM)

CHRONOLOGICAL EVENT SUMMATION

1. **June 1, 2015**: Two (2) groundwater monitor wells [MW #1 (Tank ID: A) & MW #2 (Tank ID: B)] were installed using CME-95 mobile drill rig (see following aerial map and Bore / Test Hole Reports).

2. **June 29, 2015**: Development/purging of both groundwater monitor wells was conducted to 1) eliminate sediment accumulation during the installation process, and 2) determine/observe rudimentary recovery rates.

3. **June 30, 2015**: Completed sampling of MW #1 and #2 for BTEX and anion/cation balance per US EPA Method 300.1 as requested by New Mexico Oil Conservation Division's District III Aztec Office.

4. **July 10, 2015**: BP received laboratory analytical report. All constituents were below the New Mexico Water Quality Control Commission's allowable limits.


Wood GC A 001
(Plugged & Abandoned)
&
Usselman GC 001
(Active)
95 BGT
Tank ID: A
95 BGT
Tank ID: B
Excavation Size
50' x 45' x 20' deep
Excavation Size
25' x 29' x 20'
A
B
C
D
E
F
TH
1
2
3A
4
GP1
GP2
GP3
GP4
GP5
GP6
GP7
GP8
GP9
GP12
GP13
GP14
Region of Prior El Paso
Abandon Unlined Pit
Location of GeoProbe
Investigation Borings
N
100 ft.
Google earth


BP - Wood GC A 1
Imagery Date: 11/17/2013.
Wood GC A 001
P&A marker
Usselman GC 001
well head
Tank ID: A
Tank ID: B
Excavation as of 03/27/2015
~ 25 ft. x 25 ft. x 16 ft. depth
extended south sidewall ~ 4 ft.
after initial sample 3 collected
MW #1
installed on 6/1/2015
Depression Area
~ 15 ft. x 15 ft. x 2 ft. depth
1
2
3
4
EB
MW #2
installed on 6/1/2015
Test Hole
advanced on 3/27/2015
Sample ID: TH-SWC @ 14'
Collected at time: 0900.
OVM = 457 ppm.
Sample Point Designation
N
90 ft
Google earth

TABLE 1

BP AMERICA PRODUCTION COMPANY

Wood GC A # 1

Unit Letter B, Section 4, T31N, R10W - API Number: 30-045-25820

Cleanup (Tank ID: B) & Investigation (Tank ID: A) of Two (2) 95 barrel Below-grade Tanks

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
5PC - EB @ 16' (95-B)	03/27/15	0805	5 pt. comp.	63.4	pending	pending	pending	Grayish orange to medium gray sand to sand/gravel mix, increased moisture observed from soil spoil pile, 5 point composite sample submitted to lab for BTEX 8021B, TPH 8015B, & chloride 300.0.
1 @ 5' (95-B)	03/27/15	0811	GRAB	0.2	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed
1 @ 10' (95-B)	03/27/15	0813	GRAB	24.3	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed
1 @ 15' (95-B)	03/27/15	0814	GRAB	20.8	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed
2 @ 5' (95-B)	03/27/15	0816	GRAB	24.2	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed
2 @ 10' (95-B)	03/27/15	0817	GRAB	17.2	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed
2 @ 15' (95-B)	03/27/15	0818	GRAB	16.2	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed
3 @ 5' (95-B)	03/27/15	0821	GRAB	15.2	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed
3 @ 10' (95-B)	03/27/15	0823	GRAB	221	NA	NA	NA	Grayish orange silty sand to silty clay, apparent hydrocarbon odor detected physically
3 @ 15' (95-B)	03/27/15	0824	GRAB	817	NA	NA	NA	Grayish orange silty sand to silty clay, apparent hydrocarbon odor detected physically
4 @ 5' (95-B)	03/27/15	0827	GRAB	20.6	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed
4 @ 10' (95-B)	03/27/15	0828	GRAB	71.6	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed, slight hydrocarbon odor detected physically
4 @ 15' (95-B)	03/27/15	0830	GRAB	21.6	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed
1 @ 5'-15' (95-B)	03/27/15	1005	3 pt. comp.	NA	pending	pending	pending	3 point composite sample of 1's above; submitted to lab for BTEX 8021B & TPH 8015B
2 @ 5'-15' (95-B)	03/27/15	1010	3 pt. comp.	NA	pending	pending	pending	3 point composite sample of 2's above; submitted to lab for BTEX 8021B & TPH 8015B
3 @ 5'-15' (95-B)	03/27/15	1015	3 pt. comp.	NA	pending	pending	pending	3 point composite sample of 3's above; submitted to lab for BTEX 8021B & TPH 8015B
4 @ 5'-15' (95-B)	03/27/15	1020	3 pt. comp.	NA	pending	pending	pending	3 point composite sample of 4's above; submitted to lab for BTEX 8021B & TPH 8015B
TH-SWC @ 14' (95-A)	03/27/15	0900	GRAB	457	pending	pending	pending	Medium gray silty sand to silty clay from 6 to 14 ft. below grade, strong hycrocarbon odor detected physically during trackhoe test hole advancement, gravel near 15 ft. below grade detected
NMOCD RELEASE CLOSURE STANDARDS (soils) -				100	100	10	50	

Notes:

OVM -	Organic vapor meter or photo-ionization detector (PID).
TPH -	Total petroleum hydrocarbons by US EPA Method 8015B.
BTEX -	Benzene, toluene, ethylbenzene, total xylenes by US EPA Method 8021B.
NMOCD -	New Mexico Oil Conservation Division.
ppm -	Parts per million.
mg/Kg -	Milligram per kilogram.
ND -	Not detected at Reporting Limit.
NA -	Not available or applicable.
Tank ID: A -	Depression area approx. 141 ft., S46.5W from Usselman GC 001 well head
Tank ID: B -	Excavation center approx. 85 ft., S14.5W from Usselman GC 001 well head

NMOCD RELEASE CLOSURE STANDARDS REFERENCE: "*Guidelines for Remediation of Leaks, Spills and Releases" dated: August 13, 1993.*

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

OVM CALIBRATION DATA

DATE	TIME	READING
03/27/15	0913	52.2
03/27/15	0918	52.5

TABLE 2

BP AMERICA PRODUCTION COMPANY

Wood GC A # 1

Unit Letter B, Section 4, T31N, R10W - API Number: 30-045-25820

Cleanup (Tank ID: B) & Investigation/Cleanup (Tank ID: A) of Two (2) 95 barrel Below-grade Tanks

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
TH-SWC @ 14' (95-A)	03/27/15	0900	GRAB	**457**	**4,470**	ND	2.0	Medium gray silty sand to silty clay from 6 to 14 ft. below grade, strong hycrocarbon odor detected physically during trackhoe test hole advancement, gravel near 15 ft. below grade
TH So. of (95-A) @ 5'	03/30/15	0829	GRAB	0.0	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed
TH So. of (95-A) @ 10'	03/30/15	0833	GRAB	0.0	NA	NA	NA	Dark yellowish brown silty sand to silty clay, no apparent impacts to soil was observed
TH So. of (95-A) @ 11'	03/30/15	0839	GRAB	**118.4**	**955**	ND	0.26	Medium gray silty sand to silty clay from 8 to 11 ft. below grade at north side of test hole, hydrocarbon odor detected physically during trackhoe test hole advancement
4 (west) @ 7' (95-A)	03/30/15	0908	GRAB	**265**	NA	NA	NA	Medium gray silty sand to silty clay, hycrocarbon odor detected physically during trackhoe advancement along western perimeter of depression area adjacent to west side fence line
NMOCD RELEASE CLOSURE STANDARDS (soils) -				**100**	**100**	**10**	**50**	

Notes:

OVM - Organic vapor meter or photo-ionization detector (PID).

TPH - Total petroleum hydrocarbons by US EPA Method 8015B.

BTEX - Benzene, toluene, ethylbenzene, total xylenes by US EPA Method 8021B.

NMOCD - New Mexico Oil Conservation Division.

ppm - Parts per million.

mg/Kg - Milligram per kilogram.

ND - Not detected at Reporting Limit.

NA - Not available or applicable.

Tank ID: A - Depression area approx. 141 ft., S46.5W from Usselman GC 001 well head

Tank ID: B - Excavation center approx. 85 ft., S14.5W from Usselman GC 001 well head

NMOCD RELEASE CLOSURE STANDARDS REFERENCE: "*Guidelines for Remediation of Leaks, Spills and Releases" dated: August 13, 1993.*

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

OVM CALIBRATION DATA

DATE	TIME	READING
03/27/15	0913	52.2
03/27/15	0918	52.5
03/30/15	0822	52.4

OVM CALIBRATION DATA

DATE	TIME	READING

BP AMERICA PRODUCTION COMPANY

Wood GC A # 1 - (Discovered Beneath Both 95 BGTs)

Unit Letter B, Section 4, T31N, R10W - API Number: 30-045-25820

Field & Laboratory Data from Groundwater Monitor Wells

	FIELD PARAMETERS							
SAMPLE ID	SAMPLE DATE	SAMPLE TIME	DEPTH TO WATER (feet)	TOTAL MW LENGTH (feet)	pH	Conductivity (µmhos/cm)	Temperature (°Celcius)	Volume Purged (gallons)
MW # 1 (Tank A source)	06/30/15	0920	13.13	24.91	7.14	700	15.6	4.00
MW # 2 (Tank B source)	06/30/15	0820	13.75	23.91	7.10	800	15.1	3.50
				NMWQCC STANDARDS -	6 - 9			

	LABORATORY PARAMETERS								
SAMPLE ID	Fluoride (mg/L)	Chloride (mg/L)	Nitrate-Nitrite as N (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl - benzene (µg/L)	Total Xylenes (µg/L)
MW # 1 (Tank A source)	0.46	24	ND	44	445	ND	ND	ND	ND
MW # 2 (Tank B source)	ND	26	0.54	88	450	ND	ND	**51**	**340**
NMWQCC STANDARDS -	1.6	250	10	600	1,000	10	750	750	620

Notes:

Depth to water measured from casing top of monitor well.

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

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

BLAGG ENGINEERING, INC.

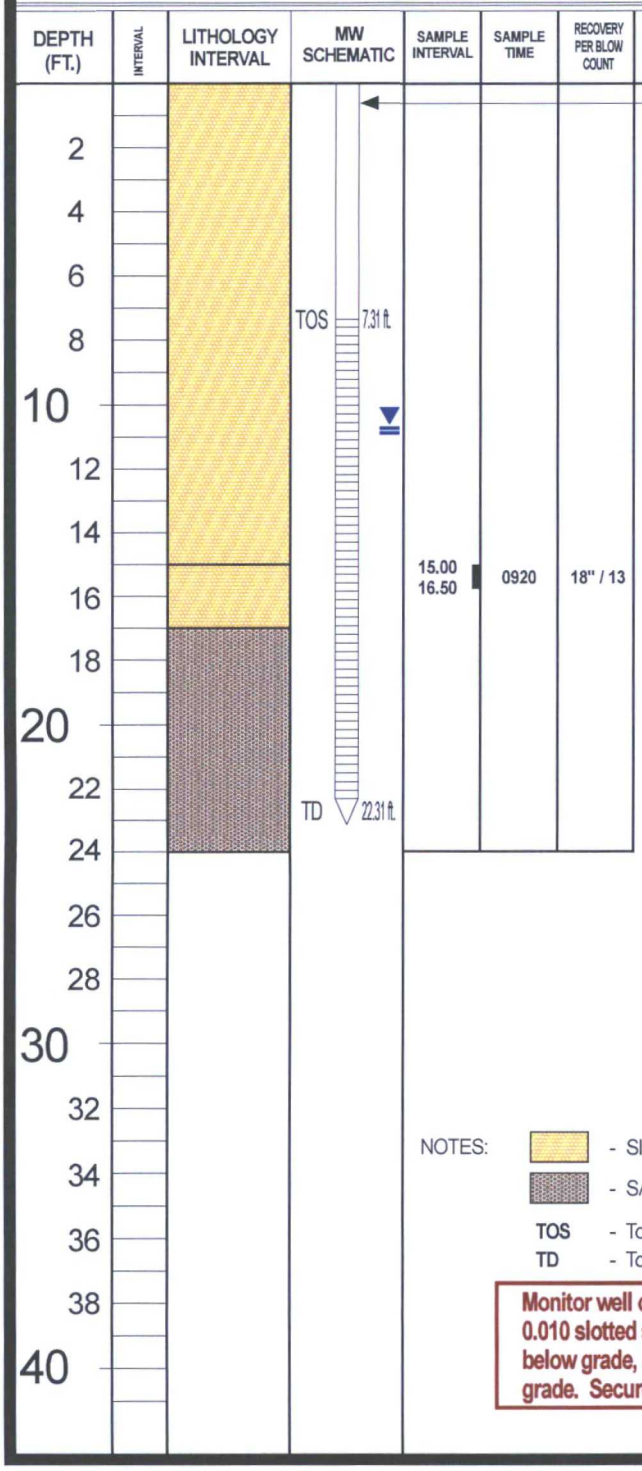
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW # 1
(Tank ID: A)

BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION CO.
LOCATION NAME:	WOOD GC A # 1 API: 3004525820 UNIT B, SEC. 4, T31N, R10W
CONTRACTOR:	BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER
BORING LOCATION:	136 FEET, S20W FROM PLUGGED & ABANDONED MARKER.

BORING #.....	BH - 1
MW #.....	1
PAGE #.....	1
DATE STARTED	06/01/15
DATE FINISHED	06/01/15
OPERATOR.....	KP
LOGGED BY.....	JCB



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.60 FT. ABOVE GRADE.

DARK YELLOWISH ORANGE SILTY SAND (BACKFILL MATERIAL), SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 15.0 FT. BELOW GRADE).

GROUNDWATER ~ 10.60 ft. BELOW GRADE ; MEASURED 06/29/15.

SAME AS ABOVE EXCEPT MOIST (15.0 - 17.0 FT. BELOW GRADE).

MODERATE BROWN SAND AND GRAVEL (COBBLES/BOULDERS SIZE), SATURATED, FIRM TO DENSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (17.0 - 24.0 FT. BELOW GRADE).

AUGER REFUSAL AT 24 FT. BELOW GRADE - LARGE BOULDER.

TOTAL LENGTH OF PIPING ~ 24.91 FT.

NOTES:
- SILTY SAND.
- SAND AND GRAVEL.

TOS - Top of screen of monitor well.
TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.60 ft. above grade to 7.31 ft. below grade, 0.010 slotted screen between 7.31 to 22.31 ft. below grade, sand packed annular from 6.0 to 22.5 ft. below grade, bentonite grout between 4.0 to 6.0 ft. below grade, cuttings fill the remaining annular to grade. Secured casing top with steel protector and padlock.

DRAWING: WOOD GC A 1 MW-1 2015-06-01. SKF | DATE: 06/29/15 | DWN BY: NJV

BLAGG ENGINEERING, INC.

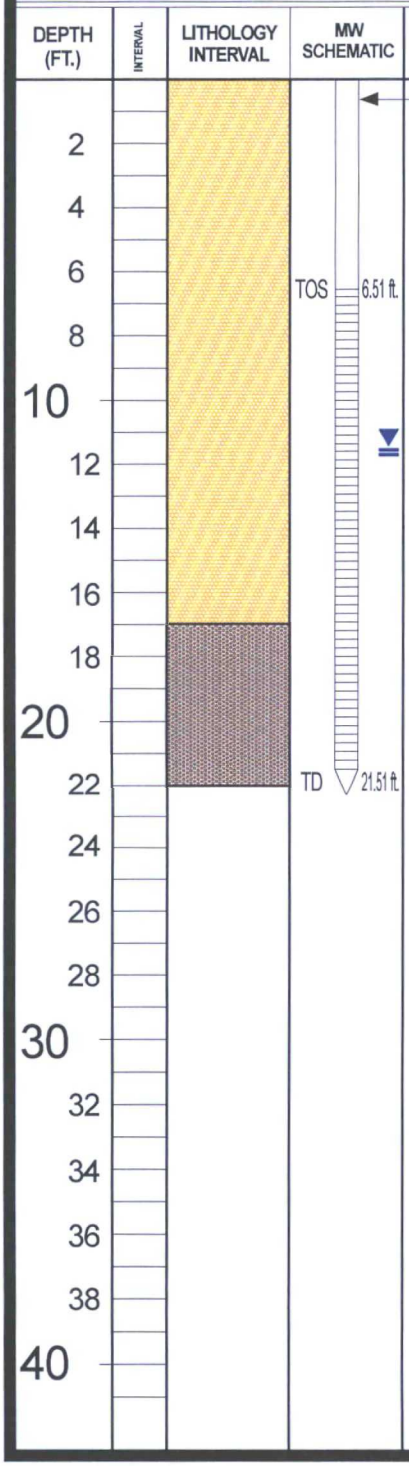
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW # 2
(Tank ID: B)

BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION CO.
LOCATION NAME:	WOOD GC A # 1 API: 3004525820 UNIT B, SEC. 4, T31N, R10W
CONTRACTOR:	BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER
BORING LOCATION:	82 FEET, S13W FROM USSELMAN GC # 1 WELL HEAD.

BORING #.....	BH - 2
MW #.....	2
PAGE #.....	2
DATE STARTED	06/01/15
DATE FINISHED	06/01/15
OPERATOR.....	KP
LOGGED BY.....	JCB



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.40 FT. ABOVE GRADE.

DARK YELLOWISH ORANGE SILTY SAND (BACKFILL MATERIAL), SLIGHTLY MOIST TO MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 17.0 FT. BELOW GRADE).

GROUNDWATER ~ 11.41 ft. BELOW GRADE ; MEASURED 06/29/15.

MODERATE BROWN SAND AND GRAVEL (COBBLES/BOULDERS SIZE), SATURATED, FIRM TO DENSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (17.0 - 22.0 FT. BELOW GRADE).

AUGER REFUSAL AT 22 FT. BELOW GRADE - LARGE BOULDER.

TOTAL LENGTH OF PIPING ~ 23.91 FT.

NOTES:
- SILTY SAND.
- SAND AND GRAVEL.

TOS - Top of screen of monitor well.
TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.40 ft. above grade to 6.51 ft. below grade, 0.010 slotted screen between 6.51 to 21.51 ft. below grade, sand packed annular from 5.0 to 22.0 ft. below grade, bentonite grout between 3.0 to 5.0 ft. below grade, cuttings fill the remaining annular to grade. Secured casing top with steel protector and padlock.

DRAWING: WOOD GC A 1 MW-2 2015-06-01. SKF | DATE: 06/29/15 | DWN BY: NJV

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

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

CHAIN-OF-CUSTODY # : N / A

WOOD GC A # 1
UNIT B, SEC. 4, T31N, R10W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : June 30, 2015

Filename : Wood GC A 1 mw log 2015-06-30.xls

DEVELOPER / SAMPLER : N J V

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1	-	-	13.13	24.91	0920	7.14	700	15.6	4.00
2	-	-	13.75	23.91	0820	7.10	800	15.1	3.50
				INSTRUMENT CALIBRATIONS =		4.01/7.00/10.00	2,800		
				DATE & TIME =		06/30/15	0600		

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

Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water.

Comments or note well diameter if not standard 2 ".

Monitor wells MW #1 & #2 installed on June 1 , 2015, initially developed on June 29, 2015.
Excellent recovery in MW # 1 & # 2 . Collected samples for BTEX per US EPA Method 8021B and cation/anion balance from MW # 1 & # 2. Purged well using 2 inch submersible electrical pump, new/clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing.

Top of casing MW # 1 ~ 2.60 ft. , MW # 2 ~ 2.40 ft. above grade .

on-site	**7:30 AM**	temp	**70 F**
off-site	**9:45 AM**	temp	**80 F**
sky cond.		**Sunny**	
wind speed	**0 - 10**	direct.	**E - ESE**

Analytical Report
Lab Order **1507007**
Date Reported: **7/10/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Wood GC A #1
Lab ID: 1507007-001 **Matrix:** AQUEOUS

Client Sample ID: MW #1
Collection Date: 6/30/2015 9:20:00 AM
Received Date: 7/1/2015 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Fluoride	0.46	0.10		mg/L	1	7/2/2015 1:30:15 AM	R27252
Chloride	24	10		mg/L	20	7/2/2015 1:42:39 AM	R27252
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	7/2/2015 1:30:15 AM	R27252
Sulfate	44	0.50		mg/L	1	7/2/2015 1:30:15 AM	R27252
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	445	100		mg/L	1	7/6/2015 12:48:00 PM	20060
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	7/7/2015 10:42:43 PM	R27335
Toluene	ND	1.0		µg/L	1	7/7/2015 10:42:43 PM	R27335
Ethylbenzene	ND	1.0		µg/L	1	7/7/2015 10:42:43 PM	R27335
Xylenes, Total	ND	2.0		µg/L	1	7/7/2015 10:42:43 PM	R27335
Surr: 4-Bromofluorobenzene	90.9	80-120		%REC	1	7/7/2015 10:42:43 PM	R27335

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Wood GC A #1
Lab ID: 1507007-002 **Matrix:** AQUEOUS

Client Sample ID: MW #2
Collection Date: 6/30/2015 8:20:00 AM
Received Date: 7/1/2015 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGT**
Fluoride	ND	0.50		mg/L	5	7/2/2015 1:55:04 AM	R27252
Chloride	26	2.5		mg/L	5	7/2/2015 1:55:04 AM	R27252
Nitrogen, Nitrate (As N)	0.54	0.50		mg/L	5	7/2/2015 1:55:04 AM	R27252
Sulfate	88	2.5		mg/L	5	7/2/2015 1:55:04 AM	R27252
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	**KS**
Total Dissolved Solids	450	200		mg/L	1	7/6/2015 12:48:00 PM	20060
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	1.0		µg/L	1	7/7/2015 11:11:25 PM	R27335
Toluene	ND	1.0		µg/L	1	7/7/2015 11:11:25 PM	R27335
Ethylbenzene	51	1.0		µg/L	1	7/7/2015 11:11:25 PM	R27335
Xylenes, Total	340	20		µg/L	10	7/8/2015 1:32:19 PM	R27348
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	7/7/2015 11:11:25 PM	R27335

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

Qualifiers:

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

Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

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

Phone #: (505) 632-1199

email or Fax#:

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

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name:
WOOD GC A # 1

Project #:

Project Manager:
NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.2

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1507007	BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Cation / Anion Balance		Grab sample	5 pt. composite sample	Air Bubbles (Y or N)
6/30/15	0720	WATER	MW # 1	40 ml VOA - 2	HCl & Cool	-001	✓													✓		
6/30/15	0920	WATER	MW # 1	500 ml - 1	Cool	-001												✓		✓		
6/30/15	0820	WATER	MW # 2	40 ml VOA - 2	HCl & Cool	-002	✓													✓		
6/30/15	0820	WATER	MW # 2	500 ml - 1	Cool	-002												✓		✓		

Analysis Request

Date	Time	Relinquished by:	Received by:	Date	Time
6/30/15	950			6/30/15	950
7/1/15	1837			07/01/15	0725

Remarks: Report F, Cl, NO_3, SO_4, & TDS only for A/C balance.

BILL DIRECTLY TO BP:

Jeff Peace, 200 Energy Court, Farmington, NM 87401

Paykey: ZEVH01REME

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507007**

10-Jul-15

Client: Blagg Engineering

Project: Wood GC A #1

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R27252**	RunNo: **27252**
Prep Date:	Analysis Date: **7/1/2015**	SeqNo: **816602** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R27252**	RunNo: **27252**
Prep Date:	Analysis Date: **7/1/2015**	SeqNo: **816603** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Chloride	4.7	0.50	5.000	0	94.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Sulfate	10	0.50	10.00	0	99.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507007**

10-Jul-15

Client: Blagg Engineering
Project: Wood GC A #1

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R27335**	RunNo: **27335**
Prep Date:	Analysis Date: **7/7/2015**	SeqNo: **819326** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	19		20.00		94.2	80	120			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R27335**	RunNo: **27335**
Prep Date:	Analysis Date: **7/7/2015**	SeqNo: **819327** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	80	120			
Toluene	22	1.0	20.00	0	110	80	120			
Ethylbenzene	22	1.0	20.00	0	109	80	120			
Xylenes, Total	65	2.0	60.00	0	108	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		98.6	80	120			

Sample ID **B24**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R27348**	RunNo: **27348**
Prep Date:	Analysis Date: **7/8/2015**	SeqNo: **820516** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	18		20.00		90.2	80	120			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R27348**	RunNo: **27348**
Prep Date:	Analysis Date: **7/8/2015**	SeqNo: **820517** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	61	2.0	60.00	0	102	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		96.6	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507007**

10-Jul-15

Client: Blagg Engineering
Project: Wood GC A #1

Sample ID **MB-20060**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **20060**	RunNo: **27294**
Prep Date: **7/1/2015**	Analysis Date: **7/6/2015**	SeqNo: **817856** Units: **mg/L**

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

Sample ID **LCS-20060**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **20060**	RunNo: **27294**
Prep Date: **7/1/2015**	Analysis Date: **7/6/2015**	SeqNo: **817857** Units: **mg/L**

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

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: **1507007** RcptNo: 1

Received by/date: 07/01/15

Logged By: **Ashley Gallegos** **7/1/2015 7:25:00 AM**

Completed By: **Ashley Gallegos** **7/1/2015 9:34:03 AM**

Reviewed By: 07/02/15

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 31, 2015

Nelson Velez

Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 320-3489
FAX (505) 632-3903

RE: Wood GC A #1 (Usselman GC 1) OrderNo.: 1503D23

Dear Nelson Velez:

Hall Environmental Analysis Laboratory received 5 sample(s) on 3/28/2015 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 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 qualifers 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1503D23**
Date Reported: **3/31/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Wood GC A #1 (Usselman GC 1)
Lab ID: 1503D23-001 **Matrix:** SOIL

Client Sample ID: 1-3 PC @ 5'-15' (95-B)
Collection Date: 3/27/2015 10:05:00 AM
Received Date: 3/28/2015 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/30/2015 10:30:36 AM	18404
Surr: DNOP	95.8	63.5-128		%REC	1	3/30/2015 10:30:36 AM	18404
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	3/30/2015 10:08:31 AM	18386
Surr: BFB	93.1	80-120		%REC	1	3/30/2015 10:08:31 AM	18386
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.041		mg/Kg	1	3/30/2015 10:08:31 AM	18386
Toluene	ND	0.041		mg/Kg	1	3/30/2015 10:08:31 AM	18386
Ethylbenzene	ND	0.041		mg/Kg	1	3/30/2015 10:08:31 AM	18386
Xylenes, Total	ND	0.082		mg/Kg	1	3/30/2015 10:08:31 AM	18386
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	3/30/2015 10:08:31 AM	18386

Tank ID: East BGT, Tank B
Sample ID on Overhead Map: 1

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Wood GC A #1 (Usselman GC 1)
Lab ID: 1503D23-002 **Matrix:** SOIL

Client Sample ID: 2-3PC @ 5'-15' (95-B)
Collection Date: 3/27/2015 10:10:00 AM
Received Date: 3/28/2015 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/30/2015 10:51:46 AM	18404
Surr: DNOP	96.9	63.5-128		%REC	1	3/30/2015 10:51:46 AM	18404
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	3/30/2015 10:37:20 AM	18386
Surr: BFB	93.0	80-120		%REC	1	3/30/2015 10:37:20 AM	18386
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.032		mg/Kg	1	3/30/2015 10:37:20 AM	18386
Toluene	ND	0.032		mg/Kg	1	3/30/2015 10:37:20 AM	18386
Ethylbenzene	ND	0.032		mg/Kg	1	3/30/2015 10:37:20 AM	18386
Xylenes, Total	ND	0.065		mg/Kg	1	3/30/2015 10:37:20 AM	18386
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	3/30/2015 10:37:20 AM	18386

Tank ID: East BGT, Tank B
Sample ID on Overhead Map: 2

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Wood GC A #1 (Usselman GC 1)
Lab ID: 1503D23-003 **Matrix:** SOIL

Client Sample ID: 3-3PC @ 5'-15' (95-B)
Collection Date: 3/27/2015 10:15:00 AM
Received Date: 3/28/2015 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	1100	96		mg/Kg	10	3/30/2015 12:21:48 PM	18404
Surr: DNOP	0	63.5-128	S	%REC	10	3/30/2015 12:21:48 PM	18404
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	140	20		mg/Kg	5	3/30/2015 11:06:09 AM	18386
Surr: BFB	172	80-120	S	%REC	5	3/30/2015 11:06:09 AM	18386
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.10		mg/Kg	5	3/30/2015 11:06:09 AM	18386
Toluene	ND	0.20		mg/Kg	5	3/30/2015 11:06:09 AM	18386
Ethylbenzene	7.3	0.20		mg/Kg	5	3/30/2015 11:06:09 AM	18386
Xylenes, Total	59	0.82		mg/Kg	10	3/30/2015 12:32:22 PM	18386
Surr: 4-Bromofluorobenzene	127	80-120	S	%REC	5	3/30/2015 11:06:09 AM	18386

Tank ID: East BGT, Tank B
Note: This south wall subsequently excavated, re-sampled on 3/30/2015

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Wood GC A #1 (Usselman GC 1)
Lab ID: 1503D23-004 **Matrix:** SOIL

Client Sample ID: 4-3PC @ 5'-15' (95-B)
Collection Date: 3/27/2015 10:20:00 AM
Received Date: 3/28/2015 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	13	9.7		mg/Kg	1	3/30/2015 1:04:20 PM	18404
Surr: DNOP	96.4	63.5-128		%REC	1	3/30/2015 1:04:20 PM	18404
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	3/30/2015 11:34:54 AM	18386
Surr: BFB	107	80-120		%REC	1	3/30/2015 11:34:54 AM	18386
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.036		mg/Kg	1	3/30/2015 11:34:54 AM	18386
Toluene	ND	0.036		mg/Kg	1	3/30/2015 11:34:54 AM	18386
Ethylbenzene	0.11	0.036		mg/Kg	1	3/30/2015 11:34:54 AM	18386
Xylenes, Total	1.1	0.072		mg/Kg	1	3/30/2015 11:34:54 AM	18386
Surr: 4-Bromofluorobenzene	111	80-120		%REC	1	3/30/2015 11:34:54 AM	18386

Tank ID: East BGT, Tank B

Sample ID on Overhead Map: 4

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Wood GC A #1 (Usselman GC 1)
Lab ID: 1503D23-005 **Matrix:** SOIL

Client Sample ID: 5PC-EB @ 16' (95-B)
Collection Date: 3/27/2015 8:05:00 AM
Received Date: 3/28/2015 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	720	9.9		mg/Kg	1	3/30/2015 1:29:02 PM	18404
Surr: DNOP	105	63.5-128		%REC	1	3/30/2015 1:29:02 PM	18404
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	31	16		mg/Kg	4	3/30/2015 12:03:39 PM	18386
Surr: BFB	138	80-120	S	%REC	4	3/30/2015 12:03:39 PM	18386
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.16		mg/Kg	4	3/30/2015 12:03:39 PM	18386
Toluene	ND	0.16		mg/Kg	4	3/30/2015 12:03:39 PM	18386
Ethylbenzene	0.98	0.16		mg/Kg	4	3/30/2015 12:03:39 PM	18386
Xylenes, Total	9.3	0.32		mg/Kg	4	3/30/2015 12:03:39 PM	18386
Surr: 4-Bromofluorobenzene	115	80-120		%REC	4	3/30/2015 12:03:39 PM	18386
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	3/30/2015 2:16:12 PM	18413

Tank ID: East BGT, Tank B

Note: Base at -16 feet, above groundwater level. Excavation subequently extended to -20 foot depth, below water table, and this soil removed.

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503D23**

31-Mar-15

Client: Blagg Engineering

Project: Wood GC A #1

Sample ID	**MB-18413**	SampType:	**MBLK**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**18413**		RunNo:	**25153**				
Prep Date:	**3/30/2015**	Analysis Date:	**3/30/2015**		SeqNo:	**744362**	Units:	**mg/Kg**		

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

Sample ID	**LCS-18413**	SampType:	**LCS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**18413**		RunNo:	**25153**				
Prep Date:	**3/30/2015**	Analysis Date:	**3/30/2015**		SeqNo:	**744363**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.9	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503D23**

31-Mar-15

Client: Blagg Engineering
Project: Wood GC A #1

Sample ID **MB-18404**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **18404**	RunNo: **25149**
Prep Date: **3/30/2015**	Analysis Date: **3/30/2015**	SeqNo: **743092** 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	9.9		10.00		98.8	63.5	128			

Sample ID **LCS-18404**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **18404**	RunNo: **25149**
Prep Date: **3/30/2015**	Analysis Date: **3/30/2015**	SeqNo: **743093** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.7	67.8	130			
Surr: DNOP	5.0		5.000		99.7	63.5	128			

Sample ID **MB-18375**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **18375**	RunNo: **25150**
Prep Date: **3/27/2015**	Analysis Date: **3/30/2015**	SeqNo: **743739** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		104	63.5	128			

Sample ID **LCS-18375**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **18375**	RunNo: **25150**
Prep Date: **3/27/2015**	Analysis Date: **3/30/2015**	SeqNo: **743740** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		105	63.5	128			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503D23**

31-Mar-15

Client: Blagg Engineering

Project: Wood GC A #1

Sample ID **MB-18386**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **18386**	RunNo: **25161**
Prep Date: **3/27/2015**	Analysis Date: **3/30/2015**	SeqNo: **743685** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		91.5	80	120			

Sample ID **LCS-18386**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **18386**	RunNo: **25161**
Prep Date: **3/27/2015**	Analysis Date: **3/30/2015**	SeqNo: **743686** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.7	64	130			
Surr: BFB	970		1000		97.3	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503D23**

31-Mar-15

Client: Blagg Engineering
Project: Wood GC A #1

Sample ID **MB-18386**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **18386**	RunNo: **25161**
Prep Date: **3/27/2015**	Analysis Date: **3/30/2015**	SeqNo: **743707** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID **LCS-18386**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **18386**	RunNo: **25161**
Prep Date: **3/27/2015**	Analysis Date: **3/30/2015**	SeqNo: **743708** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.050	1.000	0	119	76.6	128			
Toluene	1.1	0.050	1.000	0	111	75	124			
Ethylbenzene	1.1	0.050	1.000	0	113	79.5	126			
Xylenes, Total	3.4	0.10	3.000	0	113	78.8	124			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: BLAGG | Work Order Number: 1503D23 | RcptNo: 1

Received by/date: AF 03/28/15

Logged By: Anne Thorne 3/28/2015 10:30:00 AM Anne Thorne

Completed By: Anne Thorne 3/30/2015 Anne Thorne

Reviewed By: JA 03/30/15

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

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

Turn-Around Time:
☐ Standard ☑ Rush SAME DAY

Project Name: WOOD GC A #1

Project #:

Project Manager: NELSON VELEZ

Sampler: NELSON VELEZ NV

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. 1503023	BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / ~~MRO~~)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 / water - 300.1)		Grab sample	# pt. composite sample	Air Bubbles (Y or N)
3/27/15	1005	SOIL	1-3PC@5'-15' (95-B)	4oz. - 1	COOL	-001	✓		✓												3	
3/27/15	1010	SOIL	2-3PC@5'-15' (95-B)	4oz. - 1	COOL	-002	✓		✓												3	
3/27/15	1015	SOIL	3-3PC@5'-15' (95-B)	4oz. - 1	COOL	-003	✓		✓												3	
3/27/15	1020	SOIL	4-3PC@5'-15' (95-B)	4oz. - 1	COOL	-004	✓		✓												3	
3/27/15	0805	SOIL	5PC-EB@16' (95-B)	4oz. - 1	COOL	-005	✓		✓									✓			5	

Date	Time	Relinquished by:	Received by:	Date	Time
3/27/15	1245			3/27/15	1245
3/27/15	1754			3/28/15	10:30

Remarks:
BILL DIRECTLY TO BP:
Jeff Peace, 200 Energy Court, Farmington, NM 87401
Reference #: NA Paykey: ZEVH01REME

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 01, 2015

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

RE: WOOD GC A #1 (Usselman GC 1) OrderNo.: 1503D62

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/31/2015 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 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 qualifers 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: WOOD GC A #1 (Usselman GC 1)
Lab ID: 1503D62-001 **Matrix:** SOIL

Client Sample ID: 3A @ 5'-15' (95-B)
Collection Date: 3/30/2015 8:50:00 AM
Received Date: 3/31/2015 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/31/2015 11:20:28 AM	18433
Surr: DNOP	95.7	63.5-128		%REC	1	3/31/2015 11:20:28 AM	18433
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	3/31/2015 9:58:15 AM	18423
Surr: BFB	91.1	80-120		%REC	1	3/31/2015 9:58:15 AM	18423
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.042		mg/Kg	1	3/31/2015 9:58:15 AM	18423
Toluene	ND	0.042		mg/Kg	1	3/31/2015 9:58:15 AM	18423
Ethylbenzene	ND	0.042		mg/Kg	1	3/31/2015 9:58:15 AM	18423
Xylenes, Total	ND	0.085		mg/Kg	1	3/31/2015 9:58:15 AM	18423
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	3/31/2015 9:58:15 AM	18423

Tank ID: East BGT, Tank B

Note: Re-Sampling of South Wall, Following Extending Excavation

Sample ID on Overhead Map: 3A

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: WOOD GC A #1 (Usselman GC 1)
Lab ID: 1503D62-002 **Matrix:** SOIL

Client Sample ID: TH So of 95-A @ 11'
Collection Date: 3/30/2015 9:08:00 AM
Received Date: 3/31/2015 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	890	9.9		mg/Kg	1	3/31/2015 11:41:44 AM	18433
Surr: DNOP	101	63.5-128		%REC	1	3/31/2015 11:41:44 AM	18433
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	65	3.4		mg/Kg	1	3/31/2015 10:26:54 AM	18423
Surr: BFB	690	80-120	S	%REC	1	3/31/2015 10:26:54 AM	18423
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.034		mg/Kg	1	3/31/2015 10:26:54 AM	18423
Toluene	ND	0.034		mg/Kg	1	3/31/2015 10:26:54 AM	18423
Ethylbenzene	ND	0.034		mg/Kg	1	3/31/2015 10:26:54 AM	18423
Xylenes, Total	0.26	0.068		mg/Kg	1	3/31/2015 10:26:54 AM	18423
Surr: 4-Bromofluorobenzene	162	80-120	S	%REC	1	3/31/2015 10:26:54 AM	18423

This Test Sample to Evaluate BGT A. This Area Excavated During Remediation.
(Overhead Map ID: TH)

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503D62**

01-Apr-15

Client: Blagg Engineering
Project: WOOD GC A #1

Sample ID **MB-18433**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **18433**	RunNo: **25173**
Prep Date: **3/31/2015**	Analysis Date: **3/31/2015**	SeqNo: **744150** 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	9.1		10.00		91.4	63.5	128			

Sample ID **LCS-18433**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **18433**	RunNo: **25173**
Prep Date: **3/31/2015**	Analysis Date: **3/31/2015**	SeqNo: **744151** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.9	67.8	130			
Surr: DNOP	4.8		5.000		95.9	63.5	128			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503D62**

01-Apr-15

Client: Blagg Engineering
Project: WOOD GC A #1

Sample ID **LCS-18423**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **18423**	RunNo: **25192**
Prep Date: **3/30/2015**	Analysis Date: **3/31/2015**	SeqNo: **744986** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	64	130			
Surr: BFB	970		1000		96.6	80	120			

Sample ID **MB-18423**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **18423**	RunNo: **25192**
Prep Date: **3/30/2015**	Analysis Date: **3/31/2015**	SeqNo: **744987** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		92.0	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503D62**

01-Apr-15

Client: Blagg Engineering

Project: WOOD GC A #1

Sample ID **LCS-18423**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **18423**	RunNo: **25192**
Prep Date: **3/30/2015**	Analysis Date: **3/31/2015**	SeqNo: **744994** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.050	1.000	0	119	76.6	128			
Toluene	1.1	0.050	1.000	0	110	75	124			
Ethylbenzene	1.1	0.050	1.000	0	110	79.5	126			
Xylenes, Total	3.2	0.10	3.000	0	108	78.8	124			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID **MB-18423**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **18423**	RunNo: **25192**
Prep Date: **3/30/2015**	Analysis Date: **3/31/2015**	SeqNo: **744995** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: BLAGG Work Order Number: 1503D62 RcptNo: 1

Received by/date: AT 03/31/15

Logged By: Anne Thorne 3/31/2015 8:45:00 AM Anne Thorne

Completed By: Anne Thorne 3/31/2015 Anne Thorne

Reviewed By: JA 03/31/15

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

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

Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

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

Phone #: (505) 632-1199

email or Fax#:

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

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush SAME DAY

Project Name: WOOD GC A #1

Project #:

Project Manager: JEFF BLAGG

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No 1503062	BTEX + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / ~~MRO~~)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	Total Dissolved Solids	Iron, Ferrous (filtered)	Nitrate N / Nitrite N			Grab sample	3 pt. composite sample	Air Bubbles (Y or N)
3/30/15	0850	SOIL	3A @ 5'-15' (95-B)	4oz.-1	Cool	-001	✓		✓												✓	
3/30/15	0908	SOIL	TH SO. OF 95-A @ 11'	4oz.-1	Cool	-002	✓		✓											✓		

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/30/15	1445			3/30/15	1445
3/30/15	1855			03/31/15	0845

Remarks:

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

Paykey: ZEVH01REME

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 03, 2015

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

RE: Usselman GC 1 OrderNo.: 1504068

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/2/2015 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 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 qualifers 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Usselman GC 1
Lab ID: 1504068-001 **Matrix:** SOIL

Client Sample ID: Tank A N Wall 3-pt Comp 5'-15'
Collection Date: 4/1/2015 8:50:00 AM
Received Date: 4/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	16	10		mg/Kg	1	4/2/2015 9:58:47 AM	18481
Surr: DNOP	99.0	63.5-128		%REC	1	4/2/2015 9:58:47 AM	18481
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	4/2/2015 11:37:44 AM	18462
Surr: BFB	89.6	80-120		%REC	1	4/2/2015 11:37:44 AM	18462
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.050		mg/Kg	1	4/2/2015 11:37:44 AM	18462
Toluene	ND	0.050		mg/Kg	1	4/2/2015 11:37:44 AM	18462
Ethylbenzene	ND	0.050		mg/Kg	1	4/2/2015 11:37:44 AM	18462
Xylenes, Total	ND	0.10		mg/Kg	1	4/2/2015 11:37:44 AM	18462
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	4/2/2015 11:37:44 AM	18462
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	4/2/2015 11:33:22 AM	18493

Tank ID: West BGT, Tank A

Sample ID on Overhead Map: A

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Usselman GC 1
Lab ID: 1504068-002 **Matrix:** SOIL

Client Sample ID: Tank A E Wall 3-pt Comp 5'-15'
Collection Date: 4/1/2015 8:55:00 AM
Received Date: 4/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/2/2015 10:20:10 AM	18481
Surr: DNOP	104	63.5-128		%REC	1	4/2/2015 10:20:10 AM	18481
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	4/2/2015 12:06:32 PM	18462
Surr: BFB	88.9	80-120		%REC	1	4/2/2015 12:06:32 PM	18462
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.050		mg/Kg	1	4/2/2015 12:06:32 PM	18462
Toluene	ND	0.050		mg/Kg	1	4/2/2015 12:06:32 PM	18462
Ethylbenzene	ND	0.050		mg/Kg	1	4/2/2015 12:06:32 PM	18462
Xylenes, Total	ND	0.10		mg/Kg	1	4/2/2015 12:06:32 PM	18462
Surr: 4-Bromofluorobenzene	98.8	80-120		%REC	1	4/2/2015 12:06:32 PM	18462
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	4/2/2015 11:45:46 AM	18493

Tank ID: West BGT, Tank A

Sample ID on Overhead Map: B

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504068**

03-Apr-15

Client: Blagg Engineering
Project: Usselman GC 1

Sample ID	**MB-18493**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**18493**	RunNo:	**25277**				
Prep Date:	**4/2/2015**	Analysis Date:	**4/2/2015**	SeqNo:	**747465**	Units:	**mg/Kg**		

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

Sample ID	**LCS-18493**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**18493**	RunNo:	**25277**				
Prep Date:	**4/2/2015**	Analysis Date:	**4/2/2015**	SeqNo:	**747466**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.5	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504068**

03-Apr-15

Client: Blagg Engineering
Project: Usselman GC 1

Sample ID **MB-18481**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **18481**	RunNo: **25239**
Prep Date: **4/2/2015**	Analysis Date: **4/2/2015**	SeqNo: **746324** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	11		10.00		110	63.5	128			

Sample ID **LCS-18481**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **18481**	RunNo: **25239**
Prep Date: **4/2/2015**	Analysis Date: **4/2/2015**	SeqNo: **746325** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.2	67.8	130			
Surr: DNOP	4.7		5.000		93.8	63.5	128			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504068**

03-Apr-15

Client: Blagg Engineering
Project: Usselman GC 1

Sample ID	**LCS-18462**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSS**	Batch ID:	**18462**		RunNo:	**25248**				
Prep Date:	**4/1/2015**	Analysis Date:	**4/2/2015**		SeqNo:	**746614**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.2	64	130			
Surr: BFB	960		1000		96.4	80	120			

Sample ID	**MB-18462**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**PBS**	Batch ID:	**18462**		RunNo:	**25248**				
Prep Date:	**4/1/2015**	Analysis Date:	**4/2/2015**		SeqNo:	**746615**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		90.6	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504068**

03-Apr-15

Client: Blagg Engineering
Project: Usselman GC 1

Sample ID **LCS-18462**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **18462**	RunNo: **25248**
Prep Date: **4/1/2015**	Analysis Date: **4/2/2015**	SeqNo: **746620** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	109	76.6	128			
Toluene	1.1	0.050	1.000	0	108	75	124			
Ethylbenzene	1.0	0.050	1.000	0	104	79.5	126			
Xylenes, Total	3.1	0.10	3.000	0	104	78.8	124			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	80	120			

Sample ID **MB-18462**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **18462**	RunNo: **25248**
Prep Date: **4/1/2015**	Analysis Date: **4/2/2015**	SeqNo: **746621** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1504068 | RcptNo: 1

Received by/date: AT 04/02/15

Logged By: Anne Thorne 4/2/2015 7:00:00 AM

Completed By: Anne Thorne 4/2/2015

Reviewed By: 04/02/15

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

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

Chain-of-Custody Record

Client: BP America
BLAGG ENGR
Mailing Address: P.O. Box 87
Bloomfield NM 97413
Phone #: 505-320-1193
Email or Fax#:
QA/QC Package:
(Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time: SAME DAY
☐ Standard ☒ Rush
Project Name: USSELMAN GC 1
Project #:
Project Manager: J. BLAGG
Sampler: J. BLAGG
On Ice: ☒ Yes ☐ No
Sample Temperature: 4.0

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1504068	BTEX + ~~MTBE + TMB~~'s (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / ~~MRO~~)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles (Y or N)
4/1/15	0850	SOIL	TANK A NORTH WALL 3-pt comp 5'-15'	4 oz x1	COOL	-001	X		X									X				
"	0855	"	TANK A EAST WALL 3-pt comp 5'-15'	"	"	-002	X		X									X				

Remarks: BILL BP
CONTACT: JEFF PEACE
PARKER: ZEVH01REME

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/1/2015	1436	Jeffrey Blagg	Chrystal Walker	4/1/15	1436
4/1/15	1825	Chrystal Walker		04/02/15	0700

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

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

April 07, 2015

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

RE: Usselman GC 1 OrderNo.: 1504131

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/3/2015 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 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 qualifers 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1504131**
Date Reported: **4/7/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Usselman GC 1
Lab ID: 1504131-001 **Matrix:** SOIL

Client Sample ID: S Wall-W 3-pt 5'-15'
Collection Date: 4/2/2015 8:20:00 AM
Received Date: 4/3/2015 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	46	9.8		mg/Kg	1	4/3/2015 10:52:50 AM	18504
Surr: DNOP	117	63.5-128		%REC	1	4/3/2015 10:52:50 AM	18504
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	6.8	3.7		mg/Kg	1	4/3/2015 10:38:45 AM	18491
Surr: BFB	152	80-120	S	%REC	1	4/3/2015 10:38:45 AM	18491
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.037		mg/Kg	1	4/3/2015 10:38:45 AM	18491
Toluene	ND	0.037		mg/Kg	1	4/3/2015 10:38:45 AM	18491
Ethylbenzene	ND	0.037		mg/Kg	1	4/3/2015 10:38:45 AM	18491
Xylenes, Total	ND	0.074		mg/Kg	1	4/3/2015 10:38:45 AM	18491
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	4/3/2015 10:38:45 AM	18491
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	4/3/2015 10:19:53 AM	18510

Tank ID: West BGT, Tank A
Sample ID on Overhead Map: C

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Usselman GC 1
Lab ID: 1504131-002 **Matrix:** SOIL

Client Sample ID: W Wall-S 3-pt 5'-15'
Collection Date: 4/2/2015 8:25:00 AM
Received Date: 4/3/2015 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/3/2015 11:14:06 AM	18504
Surr: DNOP	94.2	63.5-128		%REC	1	4/3/2015 11:14:06 AM	18504
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	4/3/2015 11:07:27 AM	18491
Surr: BFB	90.7	80-120		%REC	1	4/3/2015 11:07:27 AM	18491
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.033		mg/Kg	1	4/3/2015 11:07:27 AM	18491
Toluene	ND	0.033		mg/Kg	1	4/3/2015 11:07:27 AM	18491
Ethylbenzene	ND	0.033		mg/Kg	1	4/3/2015 11:07:27 AM	18491
Xylenes, Total	ND	0.065		mg/Kg	1	4/3/2015 11:07:27 AM	18491
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	4/3/2015 11:07:27 AM	18491
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	4/3/2015 10:32:17 AM	18510

Tank ID: West BGT, Tank A

Sample ID on Overhead Map: D

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Usselman GC 1
Lab ID: 1504131-003 **Matrix:** SOIL

Client Sample ID: W Wall-N 3-pt 5'-15'
Collection Date: 4/2/2015 8:30:00 AM
Received Date: 4/3/2015 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/3/2015 11:45:49 AM	18504
Surr: DNOP	93.5	63.5-128		%REC	1	4/3/2015 11:45:49 AM	18504
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	4/3/2015 11:36:13 AM	18491
Surr: BFB	91.7	80-120		%REC	1	4/3/2015 11:36:13 AM	18491
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.038		mg/Kg	1	4/3/2015 11:36:13 AM	18491
Toluene	ND	0.038		mg/Kg	1	4/3/2015 11:36:13 AM	18491
Ethylbenzene	ND	0.038		mg/Kg	1	4/3/2015 11:36:13 AM	18491
Xylenes, Total	ND	0.077		mg/Kg	1	4/3/2015 11:36:13 AM	18491
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	4/3/2015 11:36:13 AM	18491
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	4/3/2015 10:44:42 AM	18510

Tank ID: West BGT, Tank A

Sample ID on Overhead Map: E

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Usselman GC 1
Lab ID: 1504131-004 **Matrix:** SOIL

Client Sample ID: S Wall-E 3-pt 5'-15'
Collection Date: 4/2/2015 1:07:00 PM
Received Date: 4/3/2015 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	140	9.8		mg/Kg	1	4/3/2015 12:06:55 PM	18504
Surr: DNOP	101	63.5-128		%REC	1	4/3/2015 12:06:55 PM	18504
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	4/3/2015 12:04:55 PM	18491
Surr: BFB	99.6	80-120		%REC	1	4/3/2015 12:04:55 PM	18491
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.043		mg/Kg	1	4/3/2015 12:04:55 PM	18491
Toluene	ND	0.043		mg/Kg	1	4/3/2015 12:04:55 PM	18491
Ethylbenzene	ND	0.043		mg/Kg	1	4/3/2015 12:04:55 PM	18491
Xylenes, Total	ND	0.085		mg/Kg	1	4/3/2015 12:04:55 PM	18491
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	4/3/2015 12:04:55 PM	18491
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	4/3/2015 10:57:06 AM	18510

Tank ID: West BGT, Tank A

Sample ID on Overhead Map: F

Note: This area of impact commingled with El Paso impact at meter house.

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504131**

07-Apr-15

Client: Blagg Engineering
Project: Usselman GC 1

Sample ID	**MB-18510**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**18510**	RunNo:	**25318**					
Prep Date:	**4/3/2015**	Analysis Date:	**4/3/2015**	SeqNo:	**749017**	Units:	**mg/Kg**			

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

Sample ID	**LCS-18510**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**18510**	RunNo:	**25318**					
Prep Date:	**4/3/2015**	Analysis Date:	**4/3/2015**	SeqNo:	**749018**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.4	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504131**

07-Apr-15

Client: Blagg Engineering
Project: Usselman GC 1

Sample ID **MB-18504**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **18504**	RunNo: **25271**
Prep Date: **4/3/2015**	Analysis Date: **4/3/2015**	SeqNo: **747345** 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	9.8		10.00		97.8	63.5	128			

Sample ID **LCS-18504**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **18504**	RunNo: **25271**
Prep Date: **4/3/2015**	Analysis Date: **4/3/2015**	SeqNo: **747346** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.3	67.8	130			
Surr: DNOP	4.5		5.000		89.1	63.5	128			

Sample ID **LCS-18483**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **18483**	RunNo: **25271**
Prep Date: **4/2/2015**	Analysis Date: **4/3/2015**	SeqNo: **748608** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		5.000		102	63.5	128			

Sample ID **MB-18483**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **18483**	RunNo: **25271**
Prep Date: **4/2/2015**	Analysis Date: **4/3/2015**	SeqNo: **748610** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		100	63.5	128			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504131**

07-Apr-15

Client: Blagg Engineering
Project: Usselman GC 1

Sample ID	**MB-18491**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**PBS**	Batch ID:	**18491**		RunNo:	**25280**				
Prep Date:	**4/2/2015**	Analysis Date:	**4/3/2015**		SeqNo:	**747586**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		89.4	80	120			

Sample ID	**LCS-18491**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSS**	Batch ID:	**18491**		RunNo:	**25280**				
Prep Date:	**4/2/2015**	Analysis Date:	**4/3/2015**		SeqNo:	**748019**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	64	130			
Surr: BFB	980		1000		97.9	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1504131**

07-Apr-15

Client: Blagg Engineering
Project: Usselman GC 1

Sample ID **MB-18491**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **18491**	RunNo: **25280**
Prep Date: **4/2/2015**	Analysis Date: **4/3/2015**	SeqNo: **747612** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID **LCS-18491**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **18491**	RunNo: **25280**
Prep Date: **4/2/2015**	Analysis Date: **4/3/2015**	SeqNo: **748045** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.050	1.000	0	120	76.6	128			
Toluene	1.1	0.050	1.000	0	111	75	124			
Ethylbenzene	1.1	0.050	1.000	0	108	79.5	126			
Xylenes, Total	3.3	0.10	3.000	0	108	78.8	124			
Surr: 4-Bromofluorobenzene	1.1		1.000		114	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: BLAGG | Work Order Number: 1504131 | RcptNo: 1

Received by/date: AT 04/03/15

Logged By: Anne Thorne 4/3/2015 7:55:00 AM Anne Thorne

Completed By: Anne Thorne 4/3/2015 Anne Thorne

Reviewed By: CS/ 04/03/15

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

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

Chain-of-Custody Record

Client: BP America

Blagg Engineering

Mailing Address:

Phone #: 505-320-1183

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: SAME DAY

☐ Standard ☒ Rush

Project Name: USSELMAN GC 1

Project #:

Project Manager: J. Blagg

Sampler: J. Blagg

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 150413	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / ~~MRO~~)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles (Y or N)
4/2/2015	0820	Soil	SOUTH WALL - WEST 3-pt 5'-15'	4oz x1	Cool	-001	X		X									X				
"	0825	"	WEST Wall - South 3-pt 5'-15'	"	"	-002	X		X									X				
"	0830	"	WEST Wall - North 3-pt 5'-15'	"	"	-003	X		X									X				
"	1307	"	South Wall - East 3-pt 5'-15'	"	"	-004	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/2/15	1416	Jeff Blagg	Christine Walker	4/2/15	1416
4/2/15	1740	Christine Walker		04/03/15	0755

Remarks: Bill BP
CONTACT: JEFF PEACE
PARKER: ZEVH01REME

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

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

FIELD BORING LOG

BORING ID: GP-1

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: GeoProbe w/ 4' LONG x 1¼" DIA PVC SLEEVES
DATE START: 1/22/2015 DATE FINISH: 1/22/15 DRILLER: KP LOGGED BY: JB
TOTAL DEPTH: 2½' CASING TYPE & SIZE: - SLOT SIZE: -
COMMENTS: 18' DUE SOUTH OF 95 BGT Center

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE		SAMPLE DESCRIPTION
	0838	SLEEVE	START	SILTY SAND CLAY
	0845		STOP	COBBLES - Could not Penetrate Refusal
5'				
10				
15'				
20				
25'				
30				

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

FIELD BORING LOG

BORING ID: GP-2

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: GeoProbe w/ 4' Long x 1¼" DIA PVC Sleeves
DATE START: 1/22/15 DATE FINISH: _____ DRILLER: KP LOGGED BY: JCB
TOTAL DEPTH: 11' CASING TYPE & SIZE: - SLOT SIZE: -
COMMENTS: 30' Due South of BGT ~~Center~~ West side

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	0854	Sleeve	Start	
5'	0858		0.0	Recover 1' Silty-Sandy clay. No HC Odor - Dark Brown.
	0903		0.1	Recover 4' SAA, MOIST
10				TPH=0.0
	0908		0.1	Recover 3' SAA, ALMOST Saturated 10'-11' COBBLES - REFUSAL
15'				
20				
25'				
30				

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

Page 1 of 1

FIELD BORING LOG

BORING ID: GP-3

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: Geoprobe w/ 4" x 1¼" PVC Sleeve
DATE START: 1/22/15 DATE FINISH: 1/22/15 DRILLER: KP LOGGED BY: JB
TOTAL DEPTH: 11½' CASING TYPE & SIZE: - SLOT SIZE: -
COMMENTS: 15' West of GP-2

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	0918	Sleeve	START	
5'	0922		0.0	Recover 12" Silty Sandy Clay, Dark Brown, No HC ODOR
	0939		0.2	Recover 30", SAA, Increased Moisture
10	0944	TPH=0.0	0.1	Recover 30", SAA Increased Moisture to Almost Saturated, COBBLES - Refusal
15'				
20				
25'				
30				

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

FIELD BORING LOG

BORING ID: GP-4

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: GeoProbe w/ 4' x 1¼" PVC sleeves.
DATE START: 1/22/2015 DATE FINISH: 1/22/15 DRILLER: KP LOGGED BY: JCB
TOTAL DEPTH: 11½' CASING TYPE & SIZE: / SLOT SIZE: /
COMMENTS: 33' West of GP-2

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	0952	Sleeve	START	
5'	1000		0.0	Recover 30" Silty Sandy clay, Dark Brown, NO HC ODOR.
	1006		0.2	Recover 36" SAA, Increased Moisture
10		TPH=0.0		
	1014		0.1	Recover 4' - SAA - Almost Saturated @ 9'± COBBLES - Refusal
15'				
20				
25'				
30				

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(505) 632-1199

Page 1 of 1

FIELD BORING LOG

BORING ID: GP-5

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: GeoProbe w/ 4' x 1¼" PVC Sleeves
DATE START: 1/22/2015 DATE FINISH: 1/22/2015 DRILLER: KP LOGGED BY: JB
TOTAL DEPTH: 11½' CASING TYPE & SIZE: / SLOT SIZE: /
COMMENTS: 48' West of GP-2

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	1022	Sleeve	START	
5'	1025		1.2	Recover 24" Silty Sandy Clay, Dark Brown, NO HC ODOR
	1030		167	Recover 30" Silty Sandy Clay, HC ODOR, Gray Stain 7'-8'
10				TPH = 1,304 ppm TPH=3,669 ppm
	1038		419	Recover 30" Silty Sandy Clay, Dark Gray, HC ODOR COBBLES - Refusal
15'				
20				
25'				
30				

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FIELD BORING LOG

BORING ID: GP-6

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: GeoProbe w/ 4' x 1¼" PVC Sleeves
DATE START: 1/22/2015 DATE FINISH: 1/22/2015 DRILLER: KP LOGGED BY: JCB
TOTAL DEPTH: 12' CASING TYPE & SIZE: / SLOT SIZE: /
COMMENTS: 66' West of GP-2

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	1042		start	
5'	1046		0.1	Recover 12" Silty Sandy Clay, Dark Brown, No HC odor
	1048		0.6	Recover 4' SAA, Increased Moisture
10				TPH=544 ppm
	1053		90	Recover 40" Silty Sandy Clay, Grey w/ HC odor 11'-12'
15'				Cobbles @ 12" - Refusal
20				
25'				
30				

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Page 1 of 1

FIELD BORING LOG

BORING ID: GP-7

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: GeoProbe w/ 4' x 1¼" PVC Sleeves
DATE START: 1/22/2015 DATE FINISH: 1/22/2015 DRILLER: KP LOGGED BY: JB
TOTAL DEPTH: 11' CASING TYPE & SIZE: / SLOT SIZE: /
COMMENTS: 82' West of GP-2

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE		SAMPLE DESCRIPTION
	1105	Sleeve	Start	~~Rec~~
5'	1108		0.0	Recover 40" Silty Sandy clay, Dark Brown, No HC odor.
	1112		0.2	Recover 40", SAA, increased Moisture
10		TPH=0.0		
	1118		0.1	Recover 40", SAA, Almost Saturated @ 10"± COBBLES @ 11' - Refusal
15'				
20				
25'				
30				

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FIELD BORING LOG

BORING ID: GP-8

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: GeoProbe w/4"x1¼" PVC Sleeves
DATE START: 1/22/2015 DATE FINISH: 1/22/2015 DRILLER: KP LOGGED BY: JB
TOTAL DEPTH: 11' CASING TYPE & SIZE: / SLOT SIZE: /
COMMENTS: 15' North of GP-5

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	1140	Sleeve	START	
5'	1150			Recover 48" Silty Sandy Clay, Dark Brown, No HC Odor
	1158			Recover 40" SAA, Increased Moisture
10			TPH=0.0	
	1204			Recover 40" SAA, Almost Saturated @ 10'
15'				Cobbles - Refusal
20				
25'				
30				

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FIELD BORING LOG

BORING ID: GP-9

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: GeoProbe w/ 4'x 1¼" PVC Sleeves
DATE START: 1/22/15 DATE FINISH: 1/22/15 DRILLER: KP LOGGED BY: JB
TOTAL DEPTH: 9' CASING TYPE & SIZE: - SLOT SIZE: -
COMMENTS: 15' EAST OF GP-2

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	1225	sleeve	START	
5'	1230		0.0	Recover 18" silty Sandy Clay, Dark Brown, NO HC ODOR
	1240		0.1	Recover 48" SAA, Increased Moisture
	1244		0.1	Recover 12" SAA
10				Cobbles @ 9' Refusal
15'				
20				
25'				
30				

TPH=0.0

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FIELD BORING LOG

BORING ID: GP-12

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: GeoProbe w/ 4' x 1¼" PVC Sleeve
DATE START: 1/23/2015 DATE FINISH: 1/23/2015 DRILLER: KP LOGGED BY: JB
TOTAL DEPTH: 14' CASING TYPE & SIZE: — SLOT SIZE: —
COMMENTS: 25' South of Pasture Fence

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	1015	SLEEVE		START
	1020		0.0	Recover 24" silty sandy clay, Dark Brown, No HC Odor.
5'				
	1023		0.1	Recover 36", SAA, increased Moisture
10				
	1031		0.3	Recover 48", SAA, V. Moist
	1036		0.2	Recover 6" crushed Rock
15'				Refusal - Cobbles
20				
25'				
30				

TPH=15 ppm

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FIELD BORING LOG

BORING ID: GP-13

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: GeoProbe w/ 4" x 1¼" sleeves
DATE START: 1/23/15 DATE FINISH: 1/23/15 DRILLER: KP LOGGED BY: SCB
TOTAL DEPTH: 12' CASING TYPE & SIZE: _____ SLOT SIZE: _____
COMMENTS: 12' South of GP-5 (About 7' South of Pasture Fence)

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	1048	sleeve	START	
5'	1053	0.1		Recover 36", Yellow Coarse Grained Sand, NO HC ODOR.
	1057	0.1		Recover 36" SAA
10	1102	228		TPH = 1,337 ppm Recover 24": 10"-11½' SAA; 11½'-12' Silty Sandy Clay, Gray, HC ODOR COBBLES - Refusal
15'				
20				
25'				
30				

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FIELD BORING LOG

BORING ID: GP-14

PROJECT: BP: Usselman GC 1
CLIENT: BP America Production Co.
DRILLING CONTRACTOR: Kyvek
EQUIPMENT USED: GEO PROBE
DATE START: 1/23/2015 DATE FINISH: 1/23/2015 DRILLER: KP LOGGED BY: JB
TOTAL DEPTH: 12' CASING TYPE & SIZE: — SLOT SIZE: —
COMMENTS: 25' South of Pasture Fence; 24' EAST OF GP-12

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE		SAMPLE DESCRIPTION
	1117	Sleeve	START	
	1120		0.0	Recover 36" Silty SAND Clay, Dark Brown, No HC ODOR
5'				
	1124		0.1	SAA, Recover 36", No HC ODOR, Increased Moisture
10				
	1128		0.2	SAA, Recover 48", Increased Moisture
				COBBLES - REFUSAL
15'				
20				
25'				
30				

TPH = 0.0

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Analytical Report

Report Summary

Client: BP America Production Co.
Chain Of Custody Number: 17726
Samples Received: 1/22/2015 4:16:00PM
Job Number: 03143-0424
Work Order: P501064
Project Name/Location: Usselman GC 1

Entire Report Reviewed By: _____ Date: 1/27/15

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

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laboratory@envirotech-inc.com

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	27-Jan-15 11:55

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
GP-5 @ 8'	P501064-01A	Solid	01/22/15	01/22/15	Glass Jar, 4 oz.
GP-5 @ 10'	P501064-02A	Solid	01/22/15	01/22/15	Glass Jar, 4 oz.
~~GP-5 @ 11'~~ GP-6 @ 11' (See Chain-of-Custody)	P501064-03A	Solid	01/22/15	01/22/15	Glass Jar, 4 oz.

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	27-Jan-15 11:55

GP-5 @ 8'

P501064-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
Toluene	**0.55**	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
Ethylbenzene	**2.10**	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
p,m-Xylene	**1.16**	0.20	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
o-Xylene	**2.02**	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
Total Xylenes	**3.19**	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
Total BTEX	**5.83**	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*126 %*		*50-150*	*1504026*	*01/23/15*	*01/26/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**134**	9.99	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8015D	
Diesel Range Organics (C10-C28)	**1170**	34.9	mg/kg	1	1504025	01/23/15	01/26/15	EPA 8015D	
Surrogate: o-Terphenyl		*133 %*		*50-200*	*1504025*	*01/23/15*	*01/26/15*	*EPA 8015D*	
Surrogate: 4-Bromochlorobenzene-FID		*143 %*		*50-150*	*1504026*	*01/23/15*	*01/26/15*	*EPA 8015D*	
Cation/Anion Analysis									
Chloride	ND	9.82	mg/kg	1	1505003	01/26/15	01/26/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	27-Jan-15 11:55

GP-5 @ 10'

P501064-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	**0.13**	0.10	mg/kg	1	1504026	01/23/15	01/27/15	EPA 8021B	
Toluene	**2.62**	0.10	mg/kg	1	1504026	01/23/15	01/27/15	EPA 8021B	
Ethylbenzene	**2.54**	0.10	mg/kg	1	1504026	01/23/15	01/27/15	EPA 8021B	
p,m-Xylene	**6.18**	0.20	mg/kg	1	1504026	01/23/15	01/27/15	EPA 8021B	
o-Xylene	**5.04**	0.10	mg/kg	1	1504026	01/23/15	01/27/15	EPA 8021B	
Total Xylenes	**11.2**	0.10	mg/kg	1	1504026	01/23/15	01/27/15	EPA 8021B	
Total BTEX	**16.5**	0.10	mg/kg	1	1504026	01/23/15	01/27/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*128 %*		*50-150*	*1504026*	*01/23/15*	*01/27/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**349**	9.98	mg/kg	1	1504026	01/23/15	01/27/15	EPA 8015D	
Diesel Range Organics (C10-C28)	**3320**	35.0	mg/kg	1	1504025	01/23/15	01/26/15	EPA 8015D	
Surrogate: o-Terphenyl		*89.2 %*		*50-200*	*1504025*	*01/23/15*	*01/26/15*	*EPA 8015D*	
Surrogate: 4-Bromochlorobenzene-FID		*158 %*		*50-150*	*1504026*	*01/23/15*	*01/27/15*	*EPA 8015D*	*Surr1*
Cation/Anion Analysis									
Chloride	ND	9.97	mg/kg	1	1505003	01/26/15	01/26/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	27-Jan-15 11:55

~~GP-5 @ 11'~~ GP-6 @ 11' (See Chain-of-Custody)

P501064-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
Toluene	**0.45**	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
Ethylbenzene	**0.57**	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
p,m-Xylene	**1.28**	0.20	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
o-Xylene	**1.57**	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
Total Xylenes	**2.85**	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
Total BTEX	**3.87**	0.10	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*126 %*		*50-150*	*1504026*	*01/23/15*	*01/26/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**99.4**	9.98	mg/kg	1	1504026	01/23/15	01/26/15	EPA 8015D	
Diesel Range Organics (C10-C28)	**445**	34.9	mg/kg	1	1504025	01/23/15	01/26/15	EPA 8015D	
Surrogate: o-Terphenyl		*97.2 %*		*50-200*	*1504025*	*01/23/15*	*01/26/15*	*EPA 8015D*	
Surrogate: 4-Bromochlorobenzene-FID		*127 %*		*50-150*	*1504026*	*01/23/15*	*01/26/15*	*EPA 8015D*	
Cation/Anion Analysis									
Chloride	ND	9.96	mg/kg	1	1505003	01/26/15	01/26/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	27-Jan-15 11:55

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1504026 - Purge and Trap EPA 5030A										
Blank (1504026-BLK1)				Prepared & Analyzed: 23-Jan-15						
Benzene	ND	0.10	mg/kg							
Toluene	ND	0.10	"							
Ethylbenzene	ND	0.10	"							
p,m-Xylene	ND	0.20	"							
o-Xylene	ND	0.10	"							
Total Xylenes	ND	0.10	"							
Total BTEX	ND	0.10	"							
Surrogate: 4-Bromochlorobenzene-PID	*0.473*		"	*0.400*		*118*	*50-150*			
LCS (1504026-BS1)				Prepared & Analyzed: 23-Jan-15						
Benzene	18.3	0.10	mg/kg	20.0		91.3	75-125			
Toluene	19.0	0.10	"	20.0		95.3	70-125			
Ethylbenzene	19.3	0.10	"	20.0		96.7	75-125			
p,m-Xylene	39.2	0.20	"	40.0		98.2	80-125			
o-Xylene	19.1	0.10	"	20.0		95.7	75-125			
Surrogate: 4-Bromochlorobenzene-PID	*0.450*		"	*0.400*		*113*	*50-150*			
Matrix Spike (1504026-MS1)		**Source: P501062-01**		Prepared & Analyzed: 23-Jan-15						
Benzene	18.5	0.10	mg/kg	20.0	ND	92.6	75-125			
Toluene	19.3	0.10	"	20.0	ND	96.7	70-125			
Ethylbenzene	19.6	0.10	"	20.0	ND	98.3	75-125			
p,m-Xylene	39.9	0.20	"	40.0	ND	99.8	80-125			
o-Xylene	19.5	0.10	"	20.0	ND	97.7	75-125			
Surrogate: 4-Bromochlorobenzene-PID	*0.451*		"	*0.400*		*113*	*50-150*			
Matrix Spike Dup (1504026-MSD1)		**Source: P501062-01**		Prepared & Analyzed: 23-Jan-15						
Benzene	18.5	0.10	mg/kg	20.0	ND	92.6	75-125	0.0121	15	
Toluene	19.3	0.10	"	20.0	ND	96.5	70-125	0.0957	15	
Ethylbenzene	19.6	0.10	"	20.0	ND	98.1	75-125	0.0943	15	
p,m-Xylene	39.9	0.20	"	40.0	ND	99.8	80-125	0.0101	15	
o-Xylene	19.5	0.10	"	20.0	ND	97.6	75-125	0.0552	15	
Surrogate: 4-Bromochlorobenzene-PID	*0.454*		"	*0.400*		*114*	*50-150*			

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	27-Jan-15 11:55

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1504025 - DRO Extraction EPA 3550M										
Blank (1504025-BLK2)				Prepared: 23-Jan-15 Analyzed: 24-Jan-15						
Diesel Range Organics (C10-C28)	ND	24.9	mg/kg							
Surrogate: o-Terphenyl	*44.4*		*"*	*39.9*		*111*	*50-200*			
LCS (1504025-BS2)				Prepared: 23-Jan-15 Analyzed: 24-Jan-15						
Diesel Range Organics (C10-C28)	455	24.9	mg/kg	498		91.2	38-132			
Surrogate: o-Terphenyl	*42.5*		*"*	*39.9*		*107*	*50-200*			
Matrix Spike (1504025-MS2)	**Source: P501062-01**			Prepared: 23-Jan-15 Analyzed: 24-Jan-15						
Diesel Range Organics (C10-C28)	467	34.9	mg/kg	499	99.9	73.5	38-132			
Surrogate: o-Terphenyl	*46.6*		*"*	*39.9*		*117*	*50-200*			
Matrix Spike Dup (1504025-MSD2)	**Source: P501062-01**			Prepared: 23-Jan-15 Analyzed: 24-Jan-15						
Diesel Range Organics (C10-C28)	486	35.0	mg/kg	500	99.9	77.3	38-132	4.00	20	
Surrogate: o-Terphenyl	*48.8*		*"*	*40.0*		*122*	*50-200*			

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	27-Jan-15 11:55

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1504026 - Purge and Trap EPA 5030A										
Blank (1504026-BLK1)				Prepared & Analyzed: 23-Jan-15						
Gasoline Range Organics (C6-C10)	ND	9.99	mg/kg							
Surrogate: 4-Bromochlorobenzene-FID	*0.424*		"	*0.400*		*106*	*50-150*			
LCS (1504026-BS1)				Prepared & Analyzed: 23-Jan-15						
Gasoline Range Organics (C6-C10)	269	9.99	mg/kg	292		92.1	80-120			
Surrogate: 4-Bromochlorobenzene-FID	*0.406*		"	*0.400*		*102*	*50-150*			
Matrix Spike (1504026-MS1)	**Source: P501062-01**			Prepared & Analyzed: 23-Jan-15						
Gasoline Range Organics (C6-C10)	272	9.99	mg/kg	292	ND	93.4	75-125			
Surrogate: 4-Bromochlorobenzene-FID	*0.403*		"	*0.400*		*101*	*50-150*			
Matrix Spike Dup (1504026-MSD1)	**Source: P501062-01**			Prepared & Analyzed: 23-Jan-15						
Gasoline Range Organics (C6-C10)	272	9.99	mg/kg	292	ND	93.3	75-125	0.0154	15	
Surrogate: 4-Bromochlorobenzene-FID	*0.409*		"	*0.400*		*102*	*50-150*			

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	27-Jan-15 11:55

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505003 - Anion Extraction EPA 300.0										
Blank (1505003-BLK1)				Prepared & Analyzed: 26-Jan-15						
Chloride	ND	9.88	mg/kg							
LCS (1505003-BS1)				Prepared & Analyzed: 26-Jan-15						
Chloride	475	9.81	mg/kg	491		96.7	90-110			
Matrix Spike (1505003-MS1)	**Source: P501066-01**			Prepared & Analyzed: 26-Jan-15						
Chloride	520	9.86	mg/kg	493	42.4	96.8	80-120			
Matrix Spike Dup (1505003-MSD1)	**Source: P501066-01**			Prepared & Analyzed: 26-Jan-15						
Chloride	522	9.99	mg/kg	499	42.4	96.1	80-120	0.469	20	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	27-Jan-15 11:55

Notes and Definitions

Surr1	Surrogate recovery was above acceptable limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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CHAIN OF CUSTODY RECORD

17726

Client:	Project Name / Location:
BP America	Usselman GC 1
Email results to: Jeff Peace	Sampler Name:
Jeff Blagg Nelson Velez	J. Blagg
Client Phone No.:	Client No.:
505-320-1193	03143-0424

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
					HNO_3	HCl																
GP-5 @ 8'	1/22/15	1030	P501064-01	1 x 4 oz				x	x								x				Y	Y
GP-5 @ 10'	"	1038	-02	"				x	x								x					
GP-6 @ 11'	"	1053	-03	"				x	x								x					
								3-day RUSH ASAP														
										Bill BP												
										PARKEY: ZEVH@IREME												

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jeff Blagg	1/22/15	1616		1/22/15	1616
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix

Soil ☒ Solid ☐ Sludge ☐ Aqueous ☐ Other ☐ _____

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

3.2, 4.6 4.5

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Analytical Report

Report Summary

Client: BP America Production Co.

Chain Of Custody Number: 17714

Samples Received: 1/22/2015 4:16:00PM

Job Number: 03143-0424

Work Order: P501065

Project Name/Location: Usselman GC 1

Entire Report Reviewed By: _____ Date: 1/29/15

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
GP-2 @10'	P501065-01A	Soil	01/21/15	01/22/15	Glass Jar, 4 oz.
GP-3 @10'	P501065-02A	Soil	01/21/15	01/22/15	Glass Jar, 4 oz.
GP-4 @10'	P501065-03A	Soil	01/21/15	01/22/15	Glass Jar, 4 oz.
GP-7 @10'	P501065-04A	Soil	01/21/15	01/22/15	Glass Jar, 4 oz.
GP-8 @10'	P501065-05A	Soil	01/21/15	01/22/15	Glass Jar, 4 oz.
~~GP-9 @19'~~ GP-9 @ 9' (See Chain-of-Custody)	P501065-06A	Soil	01/21/15	01/22/15	Glass Jar, 4 oz.

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

GP-2 @10'

P501065-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*113 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.98	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	35.0	mg/kg	1	1505001	01/27/15	01/27/15	EPA 8015D	
Surrogate: o-Terphenyl		*437 %*		*50-200*	*1505001*	*01/27/15*	*01/27/15*	*EPA 8015D*	*Surr1*
Surrogate: 4-Bromochlorobenzene-FID		*102 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8015D*	
Cation/Anion Analysis									
Chloride	**14.6**	9.99	mg/kg	1	1505013	01/27/15	01/27/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

GP-3 @10'

P501065-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*115 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.97	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	34.9	mg/kg	1	1505001	01/27/15	01/27/15	EPA 8015D	
Surrogate: o-Terphenyl		*427 %*		*50-200*	*1505001*	*01/27/15*	*01/27/15*	*EPA 8015D*	*Surr1*
Surrogate: 4-Bromochlorobenzene-FID		*103 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8015D*	
Cation/Anion Analysis									
Chloride	ND	9.81	mg/kg	1	1505013	01/27/15	01/27/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

GP-4 @10'

P501065-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*116 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.99	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	34.9	mg/kg	1	1505001	01/27/15	01/27/15	EPA 8015D	
Surrogate: o-Terphenyl		*114 %*		*50-200*	*1505001*	*01/27/15*	*01/27/15*	*EPA 8015D*	
Surrogate: 4-Bromochlorobenzene-FID		*103 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8015D*	
Cation/Anion Analysis									
Chloride	ND	9.93	mg/kg	1	1505013	01/27/15	01/27/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

GP-7 @10'

P501065-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*114 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.99	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	34.9	mg/kg	1	1505001	01/27/15	01/27/15	EPA 8015D	
Surrogate: o-Terphenyl		*119 %*		*50-200*	*1505001*	*01/27/15*	*01/27/15*	*EPA 8015D*	
Surrogate: 4-Bromochlorobenzene-FID		*103 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8015D*	
Cation/Anion Analysis									
Chloride	ND	9.91	mg/kg	1	1505013	01/27/15	01/27/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

GP-8 @10'

P501065-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*115 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.97	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	40.0	mg/kg	2	1505001	01/27/15	01/27/15	EPA 8015D	
Surrogate: o-Terphenyl		*136 %*		*50-200*	*1505001*	*01/27/15*	*01/27/15*	*EPA 8015D*	
Surrogate: 4-Bromochlorobenzene-FID		*103 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8015D*	
Cation/Anion Analysis									
Chloride	**23.6**	9.83	mg/kg	1	1505013	01/27/15	01/27/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

~~GP-9 @19'~~ GP-9 @ 9' (See Chain-of-Custody)

P501065-06 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*116 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.98	mg/kg	1	1505002	01/27/15	01/28/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	39.9	mg/kg	2	1505001	01/27/15	01/27/15	EPA 8015D	
Surrogate: o-Terphenyl		*169 %*		*50-200*	*1505001*	*01/27/15*	*01/27/15*	*EPA 8015D*	
Surrogate: 4-Bromochlorobenzene-FID		*105 %*		*50-150*	*1505002*	*01/27/15*	*01/28/15*	*EPA 8015D*	
Cation/Anion Analysis									
Chloride	**14.6**	9.95	mg/kg	1	1505013	01/27/15	01/27/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505002 - Purge and Trap EPA 5030A										
Blank (1505002-BLK1)				Prepared & Analyzed: 26-Jan-15						
Benzene	ND	0.10	mg/kg							
Toluene	ND	0.10	"							
Ethylbenzene	ND	0.10	"							
p,m-Xylene	ND	0.20	"							
o-Xylene	ND	0.10	"							
Total Xylenes	ND	0.10	"							
Total BTEX	ND	0.10	"							
Surrogate: 4-Bromochlorobenzene-PID	*0.467*		"	*0.399*		*117*	*50-150*			
LCS (1505002-BS1)				Prepared & Analyzed: 26-Jan-15						
Benzene	17.1	0.10	mg/kg	19.9		85.6	75-125			
Toluene	17.5	0.10	"	19.9		88.1	70-125			
Ethylbenzene	18.1	0.10	"	19.9		90.6	75-125			
p,m-Xylene	36.6	0.20	"	39.8		91.9	80-125			
o-Xylene	17.9	0.10	"	19.9		90.0	75-125			
Surrogate: 4-Bromochlorobenzene-PID	*0.474*		"	*0.398*		*119*	*50-150*			
Matrix Spike (1505002-MS1)		**Source: P501066-01**		Prepared & Analyzed: 26-Jan-15						
Benzene	19.5	0.10	mg/kg	19.9	ND	97.6	75-125			
Toluene	20.2	0.10	"	19.9	ND	101	70-125			
Ethylbenzene	20.8	0.10	"	19.9	0.17	103	75-125			
p,m-Xylene	42.2	0.20	"	39.9	0.22	105	80-125			
o-Xylene	20.6	0.10	"	19.9	0.21	102	75-125			
Surrogate: 4-Bromochlorobenzene-PID	*0.457*		"	*0.399*		*115*	*50-150*			
Matrix Spike Dup (1505002-MSD1)		**Source: P501066-01**		Prepared & Analyzed: 26-Jan-15						
Benzene	18.2	0.10	mg/kg	20.0	ND	91.3	75-125	6.65	15	
Toluene	18.9	0.10	"	20.0	ND	94.5	70-125	6.93	15	
Ethylbenzene	19.4	0.10	"	20.0	0.17	96.5	75-125	6.67	15	
p,m-Xylene	39.5	0.20	"	39.9	0.22	98.3	80-125	6.67	15	
o-Xylene	19.3	0.10	"	20.0	0.21	95.7	75-125	6.41	15	
Surrogate: 4-Bromochlorobenzene-PID	*0.468*		"	*0.399*		*117*	*50-150*			

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505001 - DRO Extraction EPA 3550M										
Blank (1505001-BLK1)				Prepared & Analyzed: 26-Jan-15						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: o-Terphenyl	*38.9*		"	*39.9*		*97.5*	*50-200*			
LCS (1505001-BS1)				Prepared & Analyzed: 26-Jan-15						
Diesel Range Organics (C10-C28)	538	25.0	mg/kg	500		108	38-132			
Surrogate: o-Terphenyl	*48.4*		"	*40.0*		*121*	*50-200*			
Matrix Spike (1505001-MS1)	**Source: P501066-01**			Prepared & Analyzed: 26-Jan-15						
Diesel Range Organics (C10-C28)	600	34.9	mg/kg	499	109	98.5	38-132			
Surrogate: o-Terphenyl	*60.7*		"	*39.9*		*152*	*50-200*			
Matrix Spike Dup (1505001-MSD1)	**Source: P501066-01**			Prepared & Analyzed: 26-Jan-15						
Diesel Range Organics (C10-C28)	653	35.0	mg/kg	500	109	109	38-132	8.34	20	
Surrogate: o-Terphenyl	*44.3*		"	*40.0*		*111*	*50-200*			

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505002 - Purge and Trap EPA 5030A										
Blank (1505002-BLK1)				Prepared & Analyzed: 26-Jan-15						
Gasoline Range Organics (C6-C10)	ND	9.97	mg/kg							
Surrogate: 4-Bromochlorobenzene-FID	*0.420*		"	*0.399*		*105*	*50-150*			
LCS (1505002-BS1)				Prepared & Analyzed: 26-Jan-15						
Gasoline Range Organics (C6-C10)	250	9.96	mg/kg	291		85.9	80-120			
Surrogate: 4-Bromochlorobenzene-FID	*0.427*		"	*0.398*		*107*	*50-150*			
Matrix Spike (1505002-MS1)	**Source: P501066-01**			Prepared & Analyzed: 26-Jan-15						
Gasoline Range Organics (C6-C10)	288	9.97	mg/kg	291	18.2	92.7	75-125			
Surrogate: 4-Bromochlorobenzene-FID	*0.411*		"	*0.399*		*103*	*50-150*			
Matrix Spike Dup (1505002-MSD1)	**Source: P501066-01**			Prepared & Analyzed: 26-Jan-15						
Gasoline Range Organics (C6-C10)	277	9.98	mg/kg	291	18.2	89.0	75-125	3.77	15	
Surrogate: 4-Bromochlorobenzene-FID	*0.428*		"	*0.399*		*107*	*50-150*			

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505013 - Anion Extraction EPA 300.0										
Blank (1505013-BLK1)				Prepared & Analyzed: 27-Jan-15						
Chloride	ND	9.99	mg/kg							
LCS (1505013-BS1)				Prepared & Analyzed: 27-Jan-15						
Chloride	483	9.90	mg/kg	495		97.7	90-110			
Matrix Spike (1505013-MS1)	**Source: P501068-01**			Prepared & Analyzed: 27-Jan-15						
Chloride	917	9.82	mg/kg	491	394	106	80-120			
Matrix Spike Dup (1505013-MSD1)	**Source: P501068-01**			Prepared & Analyzed: 27-Jan-15						
Chloride	909	9.91	mg/kg	495	394	104	80-120	0.902	20	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	29-Jan-15 14:42

Notes and Definitions

Surr1	Surrogate recovery was above acceptable limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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CHAIN OF CUSTODY RECORD

17714

Client:	Project Name / Location:
BP America	Usselman GC 1
Email results to: Jeff Peace, Jeff Blagg, Nelson Velez	Sampler Name: J. Blagg
Client Phone No.: 505-320-1183	Client No.: 03143-0424

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative HNO_3	Preservative HCl	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE	Sample Cool	Sample Intact
GP-2 @ 10'	1/22/2015	0908	P501065-01	1 x 4oz			X	X								X	Y	Y
GP-3 @ 10'	"	0944	-02	"			X	X								X		
GP-4 @ 10'	"	1014	-03	"			X	X								X		
GP-7 @ 10'	"	1118	-04	"			X	X								X		
GP-8 @ 10'	"	1204	-05	"			X	X								X		
GP-9 @ 9'	"	1244	-06	"			X	X								X		
									BILL	BILL	BP							
									BILL	BP								
									PARKER - BEVH01 REMEDIATION									

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jeff Blagg	1/22/15	1616		1/22/15	1616
Relinquished by: (Signature)			Received by: (Signature)		

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

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

4.7, 4.3, 3.3

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Analytical Report

Report Summary

Client: BP America Production Co.

Chain Of Custody Number: 17728

Samples Received: 1/23/2015 2:24:00PM

Job Number: 03143-0424

Work Order: P501067

Project Name/Location: Usselman GC 1

Entire Report Reviewed By: _____ Date: 2/2/15

Tim Cain, Laboratory Manager

Supplement to analytical report generated on: 2/2/15 3:19 pm

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

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envirotech-inc.com
laboratory@envirotech-inc.com

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	02-Feb-15 15:28

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
GP 10 @ 8'	P501067-01A	Soil	01/23/15	01/23/15	Glass Jar, 4 oz.
GP 10 @ 12'	P501067-02A	Soil	01/23/15	01/23/15	Glass Jar, 4 oz.
GP 11 @ 11'	P501067-03A	Soil	01/23/15	01/23/15	Glass Jar, 4 oz.
GP 12 @ 12'	P501067-04A	Soil	01/23/15	01/23/15	Glass Jar, 4 oz.
GP 13 @ 12'	P501067-05A	Soil	01/23/15	01/23/15	Glass Jar, 4 oz.
GP 14 @ 12'	P501067-06A	Soil	01/23/15	01/23/15	Glass Jar, 4 oz.

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	02-Feb-15 15:28

GP 12 @ 12'

P501067-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*108 %*		*50-150*	*1505016*	*01/27/15*	*01/30/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**15.2**	10.0	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1505015	01/27/15	01/30/15	EPA 8015D	
Surrogate: o-Terphenyl		*107 %*		*50-200*	*1505015*	*01/27/15*	*01/30/15*	*EPA 8015D*	
Surrogate: 4-Bromochlorobenzene-FID		*97.4 %*		*50-150*	*1505016*	*01/27/15*	*01/30/15*	*EPA 8015D*	
Cation/Anion Analysis									
Chloride	ND	9.83	mg/kg	1	1505013	01/27/15	01/27/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	02-Feb-15 15:28

GP 13 @ 12'

P501067-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Toluene	**1.61**	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Ethylbenzene	**1.79**	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
p,m-Xylene	**3.83**	0.20	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
o-Xylene	**3.32**	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Total Xylenes	**7.15**	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Total BTEX	**10.5**	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*122 %*		*50-150*	*1505016*	*01/27/15*	*01/30/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**237**	9.98	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8015D	
Diesel Range Organics (C10-C28)	**1100**	29.9	mg/kg	1	1505015	01/27/15	01/30/15	EPA 8015D	
Surrogate: o-Terphenyl		*111 %*		*50-200*	*1505015*	*01/27/15*	*01/30/15*	*EPA 8015D*	
Surrogate: 4-Bromochlorobenzene-FID		*125 %*		*50-150*	*1505016*	*01/27/15*	*01/30/15*	*EPA 8015D*	
Cation/Anion Analysis									
Chloride	ND	9.84	mg/kg	1	1505013	01/27/15	01/27/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	02-Feb-15 15:28

GP 14 @ 12'

P501067-06 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*106 %*		*50-150*	*1505016*	*01/27/15*	*01/30/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.99	mg/kg	1	1505016	01/27/15	01/30/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1505015	01/27/15	01/30/15	EPA 8015D	
Surrogate: o-Terphenyl		*110 %*		*50-200*	*1505015*	*01/27/15*	*01/30/15*	*EPA 8015D*	
Surrogate: 4-Bromochlorobenzene-FID		*96.3 %*		*50-150*	*1505016*	*01/27/15*	*01/30/15*	*EPA 8015D*	
Cation/Anion Analysis									
Chloride	ND	9.98	mg/kg	1	1505013	01/27/15	01/27/15	EPA 300.0	

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	02-Feb-15 15:28

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505016 - Purge and Trap EPA 5030A										
Blank (1505016-BLK1)				Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Benzene	ND	0.10	mg/kg							
Toluene	ND	0.10	"							
Ethylbenzene	ND	0.10	"							
p,m-Xylene	ND	0.20	"							
o-Xylene	ND	0.10	"							
Total Xylenes	ND	0.10	"							
Total BTEX	ND	0.10	"							
Surrogate: 4-Bromochlorobenzene-PID	*0.413*		"	*0.400*		*103*	*50-150*			
LCS (1505016-BS1)				Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Benzene	17.3	0.10	mg/kg	20.0		86.5	75-125			
Toluene	18.2	0.10	"	20.0		91.3	70-125			
Ethylbenzene	18.6	0.10	"	20.0		92.9	75-125			
p,m-Xylene	37.4	0.20	"	40.0		93.7	80-125			
o-Xylene	18.3	0.10	"	20.0		91.4	75-125			
Surrogate: 4-Bromochlorobenzene-PID	*0.435*		"	*0.400*		*109*	*50-150*			
Matrix Spike (1505016-MS1)		**Source: P501067-01**		Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Benzene	16.8	0.10	mg/kg	20.0	ND	84.0	75-125			
Toluene	19.2	0.10	"	20.0	1.79	86.9	70-125			
Ethylbenzene	21.4	0.10	"	20.0	2.63	94.1	75-125			
p,m-Xylene	45.0	0.20	"	40.0	11.4	84.0	80-125			
o-Xylene	19.8	0.10	"	20.0	6.17	68.0	75-125			
Surrogate: 4-Bromochlorobenzene-PID	*0.486*		"	*0.400*		*121*	*50-150*			
Matrix Spike Dup (1505016-MSD1)		**Source: P501067-01**		Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Benzene	17.5	0.10	mg/kg	20.0	ND	88.0	75-125	4.37	15	
Toluene	20.0	0.10	"	20.0	1.79	91.5	70-125	4.51	15	
Ethylbenzene	22.5	0.10	"	20.0	2.63	99.4	75-125	4.67	15	
p,m-Xylene	46.9	0.20	"	39.9	11.4	88.8	80-125	4.05	15	
o-Xylene	21.0	0.10	"	20.0	6.17	74.6	75-125	6.25	15	SPK1
Surrogate: 4-Bromochlorobenzene-PID	*0.484*		"	*0.399*		*121*	*50-150*			

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BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	02-Feb-15 15:28

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505015 - DRO Extraction EPA 3550M										
Blank (1505015-BLK1)				Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: o-Terphenyl	*36.2*		"	*40.0*		*90.5*	*50-200*			
LCS (1505015-BS1)				Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Diesel Range Organics (C10-C28)	411	24.9	mg/kg	498		82.4	38-132			
Surrogate: o-Terphenyl	*37.5*		"	*39.9*		*94.0*	*50-200*			
Matrix Spike (1505015-MS1)	**Source: P501067-01**			Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Diesel Range Organics (C10-C28)	1910	30.0	mg/kg	499	1260	131	38-132			
Surrogate: o-Terphenyl	*43.3*		"	*40.0*		*108*	*50-200*			
Matrix Spike Dup (1505015-MSD1)	**Source: P501067-01**			Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Diesel Range Organics (C10-C28)	1960	30.0	mg/kg	500	1260	140	38-132	2.39	20	SPK1
Surrogate: o-Terphenyl	*42.0*		"	*40.0*		*105*	*50-200*			

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Analytical Laboratory

BP America Production Co.	Project Name:	Usselman GC 1	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	02-Feb-15 15:28

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505016 - Purge and Trap EPA 5030A										
Blank (1505016-BLK1)				Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Gasoline Range Organics (C6-C10)	ND	9.99	mg/kg							
Surrogate: 4-Bromochlorobenzene-FID	*0.375*		"	*0.400*		*93.8*	*50-150*			
LCS (1505016-BS1)				Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Gasoline Range Organics (C6-C10)	251	9.99	mg/kg	292		86.2	80-120			
Surrogate: 4-Bromochlorobenzene-FID	*0.391*		"	*0.400*		*97.9*	*50-150*			
Matrix Spike (1505016-MS1)	**Source: P501067-01**			Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Gasoline Range Organics (C6-C10)	576	10.0	mg/kg	292	358	74.6	75-125			SPK1
Surrogate: 4-Bromochlorobenzene-FID	*0.544*		"	*0.400*		*136*	*50-150*			
Matrix Spike Dup (1505016-MSD1)	**Source: P501067-01**			Prepared: 27-Jan-15 Analyzed: 28-Jan-15						
Gasoline Range Organics (C6-C10)	597	9.98	mg/kg	291	358	81.9	75-125	3.54	15	
Surrogate: 4-Bromochlorobenzene-FID	*0.580*		"	*0.399*		*145*	*50-150*			

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

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BP America Production Co.	Project Name:	Usselman GC 1	
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Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1505013 - Anion Extraction EPA 300.0										
Blank (1505013-BLK1)				Prepared & Analyzed: 27-Jan-15						
Chloride	ND	9.99	mg/kg							
LCS (1505013-BS1)				Prepared & Analyzed: 27-Jan-15						
Chloride	483	9.90	mg/kg	495		97.7	90-110			
Matrix Spike (1505013-MS1)	**Source: P501068-01**			Prepared & Analyzed: 27-Jan-15						
Chloride	917	9.82	mg/kg	491	394	106	80-120			
Matrix Spike Dup (1505013-MSD1)	**Source: P501068-01**			Prepared & Analyzed: 27-Jan-15						
Chloride	909	9.91	mg/kg	495	394	104	80-120	0.902	20	

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PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	02-Feb-15 15:28

Notes and Definitions

Surr1	Surrogate recovery was above acceptable limits.
SPK1	The spike recovery for this QC sample is outside of control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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CHAIN OF CUSTODY RECORD

17728

Client:	Project Name / Location:
BP America	USSELMAN GC 1
Email results to: JEFF Peace Jeff Blagg Nelson Velez	Sampler Name: J. Blagg
Client Phone No.: 505-320-1193	Client No.: 03143-0424

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative HNO_3	Preservative HCl	Preservative	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
GP10 @ 8'	1/23/15	0843	P501067-01	1 x 40z				X	X								X				Y	Y
GP10 @ 12'	"	0847	-02	"				X	X								X					
GP11 @ 11'	"	0940	-03	"				X	X								X					
GP12 @ 12'	"	1031	-04	"				X	X								X					
GP13 @ 12'	"	1102	-05	"				X	X								X					
GP14 @ 12'	"	1128	-06	"				X	X								X					
										BILL BP												
										PAKey = ZEVH01REME												

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jeff Blagg	1/23/15	1424		1/23/15	1424
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix

Soil ☒ Solid ☐ Sludge ☐ Aqueous ☐ Other ☐ _____

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

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6.9, 6.9, 16.1

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san juan reproduction 578-129

EPFS GROUNDWATER PITS
1997 ANNUAL GROUNDWATER REPORT

Denny G. Foust
DEPUTY OIL & GAS INSPECTOR
JUL 22 1998

USSELMAN GAS COM #1
Meter/Line ID - 70753

SITE DETAILS

Legals - Twn: 31N **Rng:** 10W **Sec:** 4 **Unit:** B
NMOCD Hazard Ranking: 40 **Land Type:** FEE
Operator: AMOCO PRODUCTION COMPANY

PREVIOUS ACTIVITIES

Site Assessment: Sep-94 **Excavation:** Sep-94 (30 cy) **Soil Boring:** Aug-95
Monitor Well: Aug-95

The pit was excavated to 12 feet beneath ground surface (bgs), and one soil sample was collected. The headspace soil reading from the excavation bottom was 410 ppm. Soil analytical were as follows; benzene – 0.42 mg/kg, total BTEX – 60.1 mg/kg, TPH – 7,830 mg/kg.

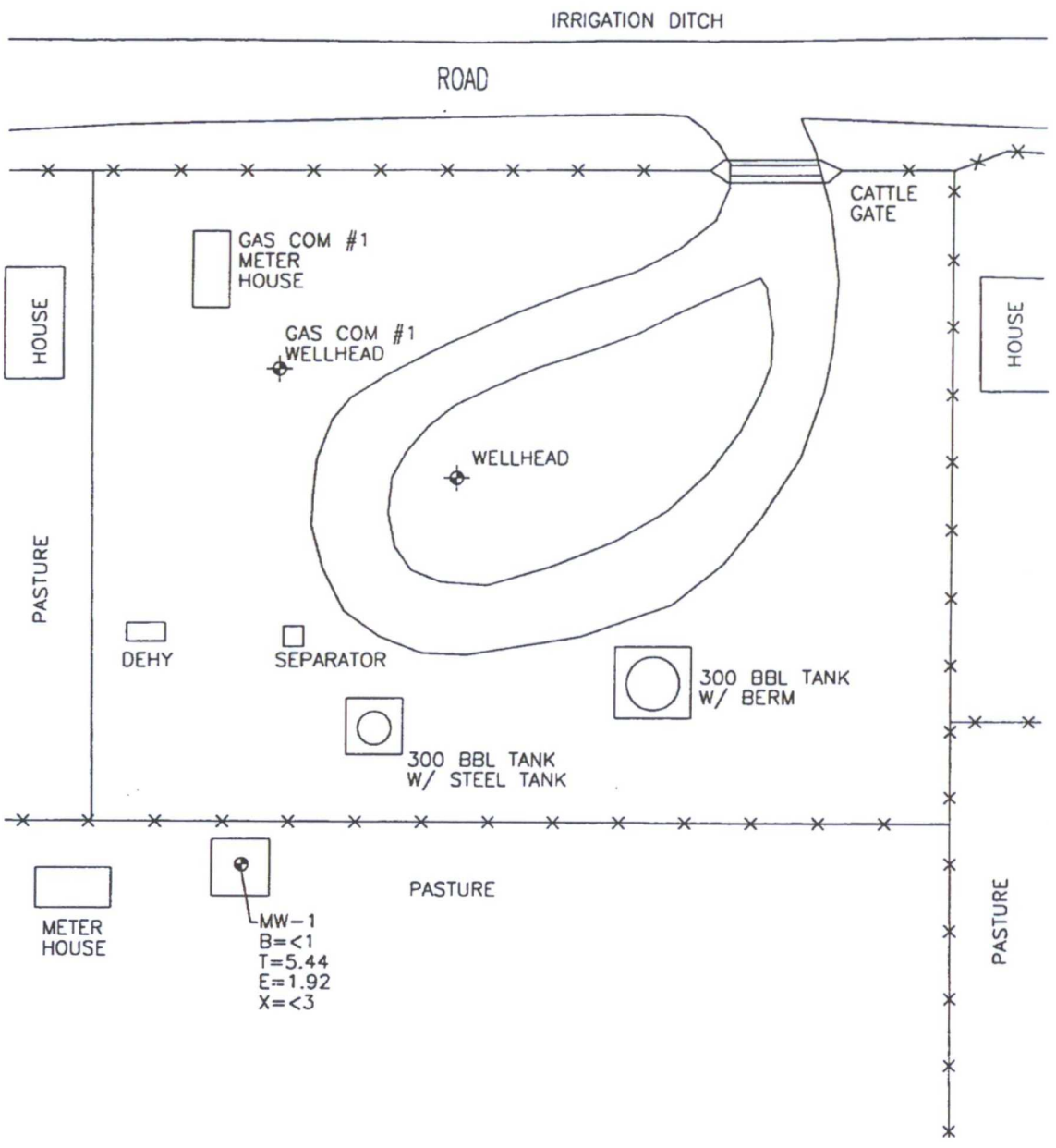
One soil boring was drilled in the center of the former pit and a monitoring well was installed. No soil sample was collected due to encountering shallow groundwater. Quarterly groundwater monitoring was initiated on 12/5/96. Groundwater analytical data are presented in Table 1. A site map is presented in Figure 1.

CONCLUSIONS

Groundwater analytical data has been below standards for 4 consecutive quarters since quarterly sampling was initiated at MW-1. Minimal impact to groundwater has occurred at this site.

RECOMMENDATIONS

- EPFS requests closure at this site.
- Following OCD approval for closure, MW-1 will be abandoned following OCD approved abandonment procedures.



LEGEND

MW-1	APPROXIMATE MONITORING WELL LOCATION AND NUMBER
B	BENZENE (ug\L)
T	TOLUENE (ug\L)
E	ETHYL BENZENE (ug\L)
X	XYLENE (ug\L)
ug\L	MICROGRAMS PER LITER

NOT TO SCALE

N

PHILIP SERVICES CORP

TITLE:

USSELMAN GAS COM #1
70753

DWN: TMM	DES.: CC	PROJECT NO.: 17520	
CHKD: CC	APPD:	EPFS GW PITS	
DATE: 1/12/98	REV.: 0	FIGURE 1	

COL. 17520BA-001