### State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

<b>Release Notification and Corrective Action</b>												
					OPI	ERATOR			Subseque	nt Report	$\boxtimes$	Final Report
Name of Co	ompany: B	Р				Contact: Steve Moskal						
Address: 20	0 Energy	Court, Farmi	ngton, N	M 87401		Telephone No.: 505-330-9179						
Facility Nat	me: Usseln	nan Gas Con	n 001		]	Facility Typ	e: Natural gas v	well				
Surface Ow	mer: Privat	te		Mineral (	Owner: I	Private			API No	. 30045110	080	
				LOC	ATION	OF RE	LEASE					
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/	West Line	County: Sa	an Juan	
В	4	31N	10W	1,190	North		1,700	East		OIL CON	le n	
		Latitu	de <u>36.</u>	93117°		Longitude	-107.88425°	_		001	10. DI	V DIST. 3
				NAT	<b>TURE</b>	OF REL	EASE			OCI	10	2017
Type of Rele	ase: Unkno	wn - hydrocar	bon			Volume of	Release: unknow	vn	Volume F	Recovered: n	ione	
Source of Re	lease: Unkn	own – suspec	t earthen p	oit; BGT and pipi	ing	Date and H	lour of Occurrence	ce:	Date and	Hour of Dis	covery:	December
Wee Immed!	ata Matian (	2:				unknown	W/h om 9		11, 2014	11:41 AM		
was mineur	ale Notice C		Yes 🗌	] No 🛛 Not R	equired	11 1 1 2 3, 10	whom?					
Ey Whom?	Steve Mosk	al				Date and H	lour:				145	
Was a Water	course Read	ched?				If YES, Volume Impacting the Watercourse.						
			Yes 🛛	No								
If a Watercou	urse was Im	pacted, Descri	be Fully.*	k								
Describe Cau	ise of Proble	em and Reme	tial Action	n Taken * During	the clos	ure of a belo	w grade tank (Tar	nk B) sa	mpling indi	icated what	annears	to be
hydrocarbon	impacts to t	the soil, likely	associate	d with an earthen	pit. Gro	undwater wa	s discovered at 5	' below	ground sur	face. A Geoj	probe w	as used to
delineate the	site. Deter	mined that the	remaining	g impacts could b	e associa	ted with a pi	peline operator.	Excavat	e known Bl	P impacts		
Describe Are	A ffected	and Cleanup A	ction Tak	en * BP everyot	ed and re	moved appro	vimately 2 210 c	ubic var	de of soil th	nat was trans	norted	off site for
landfarm trea	atment. The	areas surroun	ding Tank	A and Tank B v	vere inclu	ided in this e	xcavation. BP re	quests r	to further ac	ction at this	time	on site ioi
I hereby certi	ify that the i	nformation gi	ven above	is true and comp	plete to the	e best of my	knowledge and u	indersta	nd that purs	suant to NM	OCD ru	iles and
public health	or the envir	ronment. The	acceptanc	ce of a C-141 rep	ort by the	NMOCD m	arked as "Final R	eport" o	loes not reli	ieve the oper	rator of	liability
should their o	operations h	ave failed to a	dequately	investigate and i	remediate	contaminati	on that pose a thr	eat to g	round water	, surface wa	ter, hui	nan health
or the environ	nment. In a	ddition, NMO	CD accep	tance of a C-141	report do	bes not reliev	e the operator of	respons	ibility for c	ompliance w	vith any	other
federal, state,	, or local lay	ws and/or regu	lations.					CEDI	ATION	DIVICIO	<i>A</i>	
	n_~						OIL CON	SERV	ATION	DIVISIC	12	
Signature: (Mars Think)									//		-	$\langle \rangle$
Printed Name	e: Steve Mo	1	Approved by	Environmental S	pecialis	t: (	rel	2 <	P			
1111100110				1.1 /		/	70					
Title: Field E	nvironment	al Coordinato	r		1	Approval Dat	e: 11/16/17		Expiration	Date:		
E-mail Addre	ess: steven.r	noskal@bp.co	m		(	Conditions of	Approval:			Attached		
Date: Sentan	nber 18 201	17	Dho	me: 505-326-040	7							
Attach Addi	tional Shee	ts If Necess	ary /1	10. 303-320-949						1		

#NCS 1501255135

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

### Summary Record of Impact Remediation

<u>December 11, 2014</u> 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.

<u>December 12, 2014</u> 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.

<u>January 22 – 23, 2015</u> 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).

<u>March 26, 2015</u> 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.

<u>March 30, 2015</u> 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	Sample Date	Peak Field OVM	Lab TPH (8015D)	Lab Benzene/Total BTEX
	ID		(ppm)	(ppm)	(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	А	4/1/2015	12	16	ND/ND
Tand A E Wall 3-pt Comp 5-15	В	4/1/2015	0	ND	ND/ND
S Wall-W 3-pt 5-15	С	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	Е	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.

<u>April 8, 2015</u> 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.





# 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

10

100

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

100

NMOCD RELEASE CLOSURE STANDARDS (soils) -

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	FIELD OVM	TPH -	Benzene	BTEX -	Soil Description / Comments
			COLLECTION	READING	cumulative		cumulative	
				(ppm)	(mg/Kg)	(mg/Kg)	(mg/Kg)	
								1
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 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.

100

- 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: "<u>Guidelines for Remediation of Leaks, Spills and</u> 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

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	TOTAL MW LENGTH	рН	Conductivity	Temperature	Volume Purged					
			(feet)	(feet)		(µmhos/cm)	(°Celcius)	(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					
		6-9											

	LABORATORY PARAMETERS											
SAMPLE ID	Fluoride	Chloride	Nitrate-	Sulfate	TDS	Benzene	Toluene	Ethyl -	Total Xylenes			
			Nitrite as N					benzene				
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(µg/L)	(µg/L)	(µg/L)	(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. MONITOR WELL DEVELOPMENT &/OR SAMPLING DATA

CLIENT :	BP AME	RICA PR	OD. CO.			CHAIN-OF-(	CUSTODY # :	N	/ A
	4 T31N R1	0W/			L	ABORATOR	Y (S) USED :	HALL ENVIE	RONMENTAL
DINIT D, OLC	. 4, 10114, 141		IJ						
Date :	June 30, 20	15			[	DEVELOPER	/ SAMPLER :	N.	JV
Filename :	Wood GC A	1 mw log 2015	5-06-30.xls			PROJECT	MANAGER :	N.	JV
WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рH	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)			(	(,	(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	CALIBRATIC	DNS =	4.01/7.00/10.00	2,800		
			DATE & TIM	E =		06/30/15	0600		
NOTES :	Volume of (i.e. 2" MW	<u>water_purge</u> r = (1/12) ft	ed from well . h = 1 ft.)	prior to sa (i.e. 4" MW	<u>ampling; V =</u> r = (2/12) ft.	pi X r <mark>2 X h</mark> h = 1 ft.)	X 7.48 gal./ft	3) <u>X 3 (wellb</u>	<u>ores)</u> .
	Ideally a mir	nimum of thre	ee (3) wellbo	re volumes:		2.00" well d	iameter =	0.49 gal./ft.	of water.
Comments	or note wel	l diameter i	f not standa	rd 2 ".					
Monitor wells	MW #1 & #2	installed on Ju	une 1 . 2015. ii	nitially develo	oped on June 2	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
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#### Lab Order 1507007

Date Reported: 7/10/2015

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering			Client Sa	mple ID: M	W #1	
<b>Project:</b> Wood GC A #1			Collect	ion Date: 6/3	0/2015 9:20:00 AM	
Lab ID: 1507007-001	Matrix:	AQUEOU	S Receiv	ved Date: 7/1	/2015 7:25:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: 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 DISSOLV	ED SOLIDS				Analy	st: KS
Total Dissolved Solids	445	100	mg/L	1	7/6/2015 12:48:00 PM	1 20060
EPA METHOD 8021B: VOLATILES	6				Analy	st: NSB
Benzene	ND	1.0	µg/L	1	7/7/2015 10:42:43 PM	A R27335
Toluene	ND	1.0	µg/L	1	7/7/2015 10:42:43 PM	A R27335
Ethylbenzene	ND	1.0	µg/L	1	7/7/2015 10:42:43 PM	A R27335
Xylenes, Total	ND	2.0	µg/L	1	7/7/2015 10:42:43 PM	A R27335
Surr: 4-Bromofluorobenzene	90.9	80-120	%REC	1	7/7/2015 10:42:43 PM	A R27335

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

Qualifiers:	*

- 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

Value exceeds Maximum Contaminant Level.

- 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
- Page 1 of 5

Analytical	Report
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#### Lab Order 1507007

Date Reported: 7/10/2015

## Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Blagg Engineering			Client San	ple ID: M	W #2	
<b>Project:</b>	Wood GC A #1			Collectio	<b>n Date:</b> 6/3	80/2015 8:20:00 AM	
Lab ID:	1507007-002	Matrix:	AQUEOUS	S Receive	d Date: 7/1	/2015 7:25:00 AM	
Analyses		Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS					Analys	t: 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				Analys	t: KS
Total Diss	solved Solids	450	200	mg/L	1	7/6/2015 12:48:00 PM	20060
EPA MET	HOD 8021B: VOLATILES					Analys	t: 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
Ethylbenz	zene	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.

Qual	if	ier	'S:
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- \* 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 Page
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Page 2 of 5

C Client:	hain-c BLAG	of-Cus	/ BP AMERICA	Turn-Around T	Time:					H	A		E		IF	05	N	ME	NT		~
Viailing A	ddress:	P.O. BO	X 87	Project Name:	NOOD GC A	\#1		10		awk	ww	w.ha	allen	viro	nme	ntal	.con	7100			
		BLOOM	FIELD. NM 87413	Project #:				To		15.3/	15 3	075		Env	Engl	245		17	,		
Phone #		(505) 63	2-1199					Te	1	13-31		A	Inal	vsis	Rec	lues	t				
email or F	ax#:			Project Manag	ier:				1				1			-					1
2A/QC Pa	ckage: ard		Level 4 (Full Validation)		NELSON VI	ELEZ	1218)	anly)	MRO)			(S)		04,504	PCB's						1
Accredita	tion:	D Other		Sampler: On Ice:	NELSON VI		448 <sup>1</sup> 9 (8(	'PH (Gas	/ DRO /	(18.1)	(1.405	3270SIM		03, NO2,F	s / 8082		(A)	alance		lamon a	intiline 3
	Type)			Sample Tempe	erature:	12	11	1+3	GRO	pod 4	5 po	or 8	tals	NU,	cide	(Y	I-VO	ori B		9	nico,
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX	BTEX + MTB	TPH 8015B (	TPH (Meth	EDB (Meth	PAH (8310	RCRA 8 Me	Anions (F,C	8081 Pesti	8260B (VD	8270 (Sem	Cation / Ani		Grab samp	a ptr. cump
6/30/15	0720	WATER	MW # 1	40 ml VOA - 2	HCI & Cool	- 001	V													V	
6/30/15	0920	WATER	MW # 1	500 ml - 1	Cool	- 001			-		-							٧		V	
6/30/15	0320	WATER	MW # 2	40 ml VOA - 2	HCI & Cool	-002	V		-		_	-		1					-	V	+
6/30/15	0820	WATER	MW # 2	500 ml - 1	Cool	-002									_			٧		V	-
			-									-									+
			( <u>)</u>										-								
Date:  30/15 Date:	Time: 95D Time:	Relinquishe	nd by: n VI nd by:	Received by:	ublet.	Date Time U30/15 950 Date Time	Rem Bill Jef	iarks 1 Di f Pea	S: Ri RECT	Eport LY TO 200 E	o BP	il, NO ; ;; ;y Co	) <sub>3</sub> , S(	Farm	TDS	only	for /	A/C b	alanc	e.	

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:Wood GC A #1

Sample ID MB	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	300.0: Anions	5		
Client ID: PBW	Batch	ID: R2	7252	F	RunNo: 2	7252				
Prep Date:	Analysis D	ate: 7/	1/2015	S	SeqNo: 8	16602	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	SampT	ype: LC	S	Tes	tCode: El	PA Method	300.0: Anions	;		
Sample ID LCS Client ID: LCSW	SampT Batch	ype: LC	S 7252	Tes	tCode: El RunNo: 2	PA Method 7252	300.0: Anions	5		
Sample ID LCS Client ID: LCSW Prep Date:	SampT Batch Analysis D	ype: LC ID: R2 ate: 7/	S 7252 1/2015	Tes F S	tCode: El RunNo: 2 SeqNo: 8	PA Method 7252 16603	300.0: Anions Units: mg/L	3		
Sample ID LCS Client ID: LCSW Prep Date: Analyte	SampT Batch Analysis D Result	ype: LC n ID: R2 nate: 7/ PQL	S 7252 1/2015 SPK value	Tes F S SPK Ref Val	tCode: El RunNo: 2 SeqNo: 8 %REC	PA Method 7252 16603 LowLimit	300.0: Anions Units: mg/L HighLimit	%RPD	RPDLimit	Qual
Sample ID LCS Client ID: LCSW Prep Date: Analyte Fluoride	SampT Batch Analysis D Result 0.52	ype: LC n ID: R2 nate: 7/ PQL 0.10	S 7252 1/2015 SPK value 0.5000	Tes F S SPK Ref Val 0	tCode: El RunNo: 2 SeqNo: 8 %REC 103	PA Method 7252 16603 LowLimit 90	300.0: Anions Units: mg/L HighLimit 110	%RPD	RPDLimit	Qual
Sample ID LCS Client ID: LCSW Prep Date: Analyte Fluoride Chloride	SampT Batch Analysis D Result 0.52 4.7	ype: LC n ID: R2 pate: 7/ PQL 0.10 0.50	S 7252 1/2015 SPK value 0.5000 5.000	Tes F S SPK Ref Val 0 0	tCode: El RunNo: 2 SeqNo: 8 %REC 103 94.8	PA Method 7252 16603 LowLimit 90 90	300.0: Anions Units: mg/L HighLimit 110 110	%RPD	RPDLimit	Qual
Sample ID LCS Client ID: LCSW Prep Date: Analyte Fluoride Chloride Nitrogen, Nitrate (As N)	SampT Batch Analysis D Result 0.52 4.7 2.5	ype: LC a ID: R2 ate: 7/ PQL 0.10 0.50 0.10	S 7252 1/2015 SPK value 0.5000 5.000 2.500	Tes F S SPK Ref Val 0 0 0	tCode: El RunNo: 2 SeqNo: 8 %REC 103 94.8 101	PA Method 7252 16603 LowLimit 90 90 90	300.0: Anions Units: mg/L HighLimit 110 110 110	%RPD	RPDLimit	Qual

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

Page 3 of 5

10-Jul-15

1507007

WO#:

Hall Er	nvironmenta	l Anal	lysis I	Laborat	ory, Inc.						10-Jul-15
Client: Project:	Blagg En Wood GO	gineering C A #1									
Sample ID	5ML RB	Samp	Туре: МВ	BLK	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	PBW	Batc	h ID: R2	7335	F	RunNo: 2	7335				
Prep Date:		Analysis [	Date: 7/	7/2015	5	SeqNo: 8	19326	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-Brom	nofluorobenzene	19		20.00		94.2	80	120			
Sample ID	100NG BTEX LCS	Samp	Type: LC	s	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	LCSW	Batc	h ID: R2	7335	F	RunNo: 2	7335				
Prep Date:		Analysis [	Date: 7/	7/2015	S	SeqNo: 8	19327	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-Brom	nofluorobenzene	20		20.00		98.6	80	120			
Sample ID	B24	Samp	Туре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	PBW	Batc	h ID: R2	7348	F	RunNo: 2	7348				
Prep Date:		Analysis [	Date: 7/	8/2015	S	SeqNo: 8	20516	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total		ND	2.0								
Surr: 4-Brom	nofluorobenzene	18		20.00		90.2	80	120			
Sample ID	100NG BTEX LCS	Samp	Type: LC	S	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	LCSW	Batc	h ID: R2	7348	F	RunNo: 2	7348				
Prep Date:		Analysis [	Date: 7/	8/2015	S	SeqNo: 8	20517	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			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

19

20.00

QC SUMMARY REPORT

Е Value above quantitation range

Surr: 4-Bromofluorobenzene

Analyte detected below quantitation limits J

0 RSD is greater than RSDlimit

R RPD outside accepted recovery limits

- S Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

96.6

- Ρ Sample pH Not In Range
- RL Reporting Detection Limit

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1507007 10- Iul-15

WO#:

80

120

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:Wood GC A #1

Sample ID MB-20060	SampType: MBLK	TestCode: SM2540C M	OD: 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 M	DD: Total Dissolved Solids
Sample ID LCS-20060 Client ID: LCSW	SampType: LCS Batch ID: 20060	TestCode: SM2540C M0 RunNo: 27294	DD: Total Dissolved Solids
Sample ID LCS-20060 Client ID: LCSW Prep Date: 7/1/2015	SampType: LCS Batch ID: 20060 Analysis Date: 7/6/2015	TestCode: <b>SM2540C M</b> 0 RunNo: <b>27294</b> SeqNo: <b>817857</b>	DD: Total Dissolved Solids Units: mg/L
Sample ID LCS-20060 Client ID: LCSW Prep Date: 7/1/2015 Analyte	SampType: LCS Batch ID: 20060 Analysis Date: 7/6/2015 Result PQL SPK value	TestCode: SM2540C Mo RunNo: 27294 SeqNo: 817857 SPK Ref Val %REC LowLimit	DD: Total Dissolved Solids Units: mg/L HighLimit %RPD RPDLimit Qual

#### 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

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1507007 10-Jul-15

WO#:

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albu TEL: 505-345-3975 Website: www.hau	Analysis 4901 iquerqua FAX: 50 llenviro	s Laboratory Hawkins NE e. NM 87109 05-345-4107 nmental.com	Sam	ple Log-In Check	List
Client Name: BLAGG	Work Order Number:	15070	007		RcptNo: 1	
Received by/date: Achieved By: Ashley Gallegos Completed By: Ashley Gallegos	07   01   15 7/1/2015 7:25:00 AM 7/1/2015 9:34:03 AM		st St	FJ FJ		
Chain of Custody	07/02/16					
Chain of Custody V		Vaa	[ ]	No []	Not Procent	
<ol> <li>Custody seals intact on sample bottles?</li> <li>Is Chain of Custody complete?</li> </ol>		Yes		No []	Not Present	
2 How was the sample delivered?		Cour	ier	100 1.11		
3. How was the sample delivered?		0001				
<u>Log In</u>						
4. Was an attempt made to cool the sample	es?	Yes		No []	NA []	
5. Were all samples received at a temperate	ure 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 tes	et/e)?	Vec		No []		
8 Are samples (except VOA and ONG) pror	perly preserved?	Yes		No 🗌		
9. Was preservative added to bottles?	beily preserved:	Yes		No 🕷	NA 🗔	
				<b>r</b> 1		
10. VOA vials have zero headspace?		Yes		No L.I	No VOA Vials [_]	
<ol> <li>Were any sample containers received bro</li> <li>Does paperwork match bottle labels?</li> <li>(Note discremencies on chain of custody)</li> </ol>	oken?	Yes		No 🔛	# of preserved bottles checked for pH: (<2 or >12 ut	aless 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	th this order?	Yes		No []	NA 🗖	
Parean Natified	Data		1723 407500 1071 ( est - C. 4., ) 3773	and the second second		
By Whom: Regarding: Client Instructions:	Date j Via: [	] eMa	nil [] Phone	e [ ] Fax	[] In Person	
17. Additional remarks:						
18. <u>Cooler Information</u> <u>Cooler No</u> Temp <sup>o</sup> C Condition   1 1.3 Good	Seal Intact   Seal No   S	Seal Da	ite Sign	ned By		
Page 1 of 1						



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 <u>www.hallenvironmental.com</u> 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

## Hall Environmental Analysis Laboratory, Inc.

### Analytical Report Lab Order 1503D23

Date Reported: 3/31/2015

<b>CLIENT:</b>	Blagg Engineeri	ng	
<b>Project:</b>	Wood GC A #1	(Usselman GC 1)	
Lab ID:	1503D23-001	Matrix: SO	L

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 RANG	GE				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.

Quali	fiers:	
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- 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
- Page 1 of 9

## Hall Environmental Analysis Laboratory, Inc.

### **Analytical Report** Lab Order 1503D23

Date Reported: 3/31/2015

#### **CLIENT:** Blagg Engineering

Wood GC A #1 (Usselman GC 1) **Project:** 1503D23-002 Lab ID: 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 RANG	E				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:	0	ual	lifi	ier	's:	
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\*

- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S

Value exceeds Maximum Contaminant Level.

- Analyte detected in the associated Method Blank B
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Sample pH Not In Range P
- RL Reporting Detection Limit
- Page 2 of 9

#### **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: 1503D23-003 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.

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\*

- 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

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

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering Wood GC A #1 (Usselman GC 1) **Project:** 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 RANG	GE				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.

Qı	ıali	fie	rs:	:	*

- 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

Value exceeds Maximum Contaminant Level.

- 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

Page 4 of 9

#### **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: 1503D23-005 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 C	RGANICS					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 RANG	E					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.	В	Analyte detected
	Е	Value above quantitation range	Н	Holding times
	J	Analyte detected below quantitation limits	ND	Not Detected a
	0	RSD is greater than RSDlimit	Р	Sample pH No

- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- ed in the associated Method Blank
- for preparation or analysis exceeded
- at the Reporting Limit
- t In Range
- RL Reporting Detection Limit
- Page 5 of 9

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

**Client:** B V **Project:** 

Sample ID MB-1841 Client ID: PBS Prep Date: 3/30/20 Analyte Chloride Sample ID LCS-184 Client ID: LCSS Analysis Date: 3/30/2015 SeqNo: 744363 Prep Date: 3/30/2015 Units: mg/Kg SPK value SPK Ref Val %REC LowLimit %RPD RPDLimit Qual Analyte Result PQL HighLimit 14 Chloride 1.5 15.00 0 95.9 90 110

#### Qualifiers:

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

WO#: 1503D23 31-Mar-15

Blagg E Wood (	Engineering GC A #1											
3	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	300.0: Anion	S				
	Batch	413	F	RunNo: 2								
15	Analysis Date: 3/30/2015			5	SeqNo: 7	44362	Units: mg/Kg					
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
	ND	1.5										
13	SampType: LCS			TestCode: EPA Method 300.0: Anio				S				
	Batch ID: 18413			F	RunNo: 2	5153						

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# **QC SUMMARY REPORT**

Hall	Enviror	nmental	Analysis	Laboratory	, Inc.

**Client: Project:** 

\_\_\_\_

**Blagg Engineering** Wood GC A #1

Sample ID MB-18404	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									
Sampia ID I CS 19404	SampType:   CS	TestCode: EBA Method 2015D: Diesel Bange C									
		Testode. EFA method ov 150. Dieser Kange C	ngames								
Client ID: LCSS	Batch ID: 18404	RunNo: <b>25149</b>									
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 C	Drganics								
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								
Sum: DNOP	10 10.00	104 63.5 128									
Sample ID LCS-18375	Sample ID LCS-18375 SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics										
Client ID: LCSS	Batch ID: 18375	RunNo: <b>25150</b>									
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								
Sur: DNOP	5.3 5.000	105 63.5 128									

Qualifiers:

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

WO#: 1503D23

31-Mar-15

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# QC SUMMARY REPORT

WO#: 1503D23 31-Mar-15

Hall	Environmental	Analysis	Laboratory,	Inc.
		•		

Client:Blagg EngineeringProject:Wood GC A #1

Sample ID MB-18386	Samp	Туре: МЕ	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batc	h ID: 18	386	F	RunNo: 2	5161				
Prep Date: 3/27/2015	Analysis [	Date: 3/	30/2015	S	SeqNo: 7	43685	Units: mg/k	g		
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	Samp	Type: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batc	h ID: 18	386	F	RunNo: 2	5161				
Prep Date: 3/27/2015	Analysis [	Date: 3/	30/2015	S	SeqNo: 7	43686	Units: mg/M	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Quelling Denne Querting (QDQ)	25	FO	25.00	0	007	64	130			
Gasoline Range Organics (GRO)	25	5.0	25.00	0	90.7	04	150			

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

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E Reporting Detection Ennit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:Wood GC A #1

Sample ID MB-18386	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batc	h ID: 18	386	F	RunNo: 2	5161				
Prep Date: 3/27/2015	Analysis [	Date: 3/	30/2015	S	SeqNo: 7	43707	Units: mg/K	g		
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	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batcl	h ID: 18	386	RunNo: 25161						
Prep Date: 3/27/2015	Analysis D	Date: 3/	30/2015	S	eqNo: 7	43708	Units: mg/K	g		
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	31	0.10	3 000	0	113	78 8	124			
	5.4	0.10	5.000	0	115	10.0	124			

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

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31-Mar-15

WO#: 1503D23

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmenta Al TEL: 505-345-397 Website: www.l	al Analysis 4901 I Ibuquerque 75 FAX: 50 hallenviron	Laboratory Hawkins NE , NM 87109 15-345-4107 imental.com	Sam	ple Log-In Cl	neck List
Client Name: BLAGG	Work Order Numbe	er: 1503D	23		RcptNo:	1
Received by/date: AF03/28/19	5					
Logged By: Anne Thorne	3/28/2015 10:30:00 A	MA	a	Im Am	_	
Completed By: Anne Thorne	3/30/2015		a	m. Am	~	
Reviewed By:	03/30/15					
Chain of Custody						
1. Custody seals intact on sample bottles?		Yes		No 🗆	Not Present 🗹	
2. Is Chain of Custody complete?		Yes	$\checkmark$	No 🗌	Not Present	
3. How was the sample delivered?		Courie	ər			
Log In						
4. Was an attempt made to cool the samples	s?	Yes		No 🗌		
5. Were all samples received at a temperatu	re 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	t(s)?	Yes		No 🗌		
8. Are samples (except VOA and ONG) prop-	erly 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 bro	ken?	Yes		No 🗹	# of preserved	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes		No 🗆	bottles checked for pH:	>12 unless noted)
13. Are matrices correctly identified on Chain of	of Custody?	Yes		No 🗆	Adjusted?	
14. Is it clear what analyses were requested?		Yes	$\checkmark$	No 🗆		
15. Were all holding times able to be met?		Yes		No 🗆	Checked by:	
(IT NO, NOTITY CUSTOMER FOR Authorization.)						
Special Handling (if applicable)						
16. Was client notified of all discrepancies with	this order?	Yes		No 🗌	NA 🗹	
Person Notified: By Whom:	Date Via:	eMai	Phone	Fax	In Person	

17. Additional remarks:

Regarding: Client Instructions:

18. Cooler Information

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

Page 1 of 1

CI	hain-o	of-Cus	stody Record	Turn-Around 1	Time:	SAME					łA	LL	E	NN	TF	20	N	ME	NT		L
Client:	BLAG	G ENGR.	/ BP AMERICA	Standard	Rush_	DAY			F	-		AL	Y	519	5 L	A	BO	R/	ATC	DR	Y
				Project Name:						-	ww	w.ha	allen	viro	nme	ntal	.com	1			
Mailing Ad	ddress:	P.O. BO	X 87	w00	o gc A	#1		49	01 H	lawk	ins	NE -	Alt	ouqu	erqu	ue, N	IM 8	37109	9		
		BLOOM	FIELD, NM 87413	Project #:			1	Te	el. 50	)5-34	45-3	975		Fax	505-	-345	-410	7			
Phone #:		(505) 63	32-1199				5.6			1		¢	Anal	ysis	Rec	ques	st	i.			
email or F	ax#:			Project Manag	jer:				no	-				()				<b>(न</b>			$\top$
QA/QC Pad	ckage: ard		Level 4 (Full Validation)		NELSON VI	ELEZ	0218)	only)	(MRC)			1S)		PO4,SO	2 PCB's			ter - 300.			e
Accreditat	ion:			Sampler:	NELSON VI	ELEZ 92V	1°	(Gas	RO /	1)	1)	OSIN		102,	8082			/ wat	1		du
	)	Other	-	On Ice	Xi Yes	III. No		TPH	0/0	418	504	827(	s	0 <sub>3</sub> ,N	es / s		(YO	00.0			te sa
	Type)		1	Sample Temp	eratures 2 ·			BE +	(GR	pou	poq	o.	etal	CI,N	icide	(A	ni-V	oil - 3		ble	posit
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX +-INT	BTEX + MT	TPH 8015B	TPH (Met	EDB (Met	PAH (8310	RCRA 8 M	Anions (F,	8081 Pest	8260B (VC	8270 (Sen	Chloride (s		Grab sam	Kpt. com
127/15	1605	SOIL	1-3PCC5-15'(95-B)	402 1	COOL		V		$\checkmark$												3 74
3/27/15	1010	SOIL	2-38-05-15 (95-8)	402 1	COOL	702	$\checkmark$		$\checkmark$											1	3
3/27/15	1015	SOIL	3-3RC 5-15'(95-B)	4021	COOL	-713	$\checkmark$		$\checkmark$												3
3/27/15	1020	SOIL	4-3PC@5-15'(95-8)	4021	COOL		$\checkmark$		$\checkmark$												3
3/27/15	0805	50i2	5PC-58 C 16 (95-B)	4021	CooL	-765	V		$\checkmark$									$\checkmark$		_	5
																				+	+
																				-	+
Date: 3/27/15	Time: 1245	Relinquish	her by:	Received by:	Tulkele	Date Time $\frac{3}{27}/15/245$ Date Time	Rer BI	nark LL DI ff Pea	s: RECT ace, 1	<b>LY T</b> 200 E	o Bf	e: gy Co	ourt,	Farm	ningt	on, N	4M 8	7401			
127/15	5 1757 Australia) and the		the halte	(Am	h	3/28/15 10:30	Re	efere	nce #	t:		NA			Pay	ykey	2	EVH	101	¢ m	E

# 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 <u>www.hallenvironmental.com</u> 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

### Hall Environmental Analysis Laboratory, Inc.

**Analytical Report** Lab Order 1503D62

#### Date Reported: 4/1/2015

#### **CLIENT:** Blagg Engineering

WOOD GC A #1 (Usselman GC 1) **Project:** 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 RANG	GE				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.

Qua	lifi	e	rs:	
-----	------	---	-----	--

\*

- 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

Page 1 of 5

Hall Environmental Analysis Laboratory, Inc.	

**Analytical Report** Lab Order 1503D62 Date Reported: 4/1/2015

## **CLIENT:** Blagg Engineering

WOOD GC A #1 (Usselman GC 1) **Project:** 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 RAN	GE					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
	I	Analyte detected below quantitation limits

- detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S
- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Page 2 of 5

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering Project: WOOD GC A #1

Sample ID MB-18433	SampType: MBLK TestCode: EPA M				PA Method	od 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 PC	L 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				
	SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics									
Sample ID LCS-18433	SampType:	LCS	Tes	tCode: EF	PA Method	8015D: Diese	el Range C	Organics		
Sample ID LCS-18433 Client ID: LCSS	SampType: Batch ID:	LCS 18433	Tes F	tCode: EF	PA Method 5173	8015D: Diese	el Range C	Organics		
Sample ID LCS-18433 Client ID: LCSS Prep Date: 3/31/2015	SampType: Batch ID: Analysis Date:	LCS 18433 3/31/2015	Tes F	tCode: EF RunNo: 29 SeqNo: 74	PA Method 5173 44151	8015D: Diese Units: mg/K	el Range C	Organics		
Sample ID LCS-18433 Client ID: LCSS Prep Date: 3/31/2015 Analyte	SampType: Batch ID: Analysis Date: Result PC	LCS 18433 3/31/2015 L SPK value	Tes F SPK Ref Val	tCode: EF RunNo: 29 SeqNo: 74 %REC	PA Method 5173 44151 LowLimit	8015D: Diese Units: mg/K HighLimit	BI Range C g %RPD	<b>Drganics</b> RPDLimit	Qual	
Sample ID LCS-18433 Client ID: LCSS Prep Date: 3/31/2015 Analyte Diesel Range Organics (DRO)	SampType: Batch ID: Analysis Date: Result PC 43	LCS 18433 3/31/2015 L SPK value 10 50.00	Tes F S SPK Ref Val 0	tCode: EF RunNo: 29 SeqNo: 74 %REC 86.9	PA Method 5173 44151 LowLimit 67.8	8015D: Diese Units: mg/K HighLimit 130	el Range C g %RPD	<b>Drganics</b> RPDLimit	Qual	

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

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WO#: **1503D62** *01-Apr-15* 

WO#: 1503D62

01-Apr-15

Hall Environmental Analysis Laboratory, Inc.

**Client:** Blagg Engineering WOOD GC A #1 **Project:** 

Sample ID LCS-18423	SampT	ype: LC	s	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 D	ate: 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: BEB	920		1000		92.0	80	120			

Qualifiers:

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

Page 4 of 5

RL
Client:Blagg EngineeringProject:WOOD GC A #1

Sample ID LCS-18423	Samp	Type: LC	S	Tes	tCode: El	PA Method				
Client ID: LCSS	Batc	h ID: 18	423	RunNo: <b>25192</b>						
Prep Date: 3/30/2015	Analysis [	)ate: 3/	31/2015	SeqNo: 744994			Units: mg/H	۲g		
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	Samp	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Sample ID MB-18423 Client ID: PBS	Samp1 Batcl	ype: ME	3LK 423	Tes F	tCode: El RunNo: 2	PA Method 5192	8021B: Vola	tiles		
Sample ID MB-18423 Client ID: PBS Prep Date: 3/30/2015	Samp] Batcl Analysis [	Type: ME n ID: 18 Date: 3/	BLK 423 31/2015	Tes F S	tCode: El RunNo: 2 GeqNo: 7	PA Method 5192 44995	8021B: Vola Units: mg/k	tiles (g		
Sample ID MB-18423 Client ID: PBS Prep Date: 3/30/2015 Anatyte	Samp Batcl Analysis [ Result	Type: ME n ID: 18 Date: 3/ PQL	3LK 423 31/2015 SPK value	Tes R S SPK Ref Val	tCode: El RunNo: 2 GeqNo: 7 %REC	PA Method 5192 44995 LowLimit	8021B: Vola Units: mg/k HighLimit	tiles (g %RPD	RPDLimit	Quai
Sample ID MB-18423 Client ID: PBS Prep Date: 3/30/2015 Analyte Benzene	Samp] Batcl Analysis [ Result ND	ype: ME n ID: 18 Date: 3/ PQL 0.050	3LK 423 31/2015 SPK value	Tes F SPK Ref Val	tCode: El RunNo: 2 GeqNo: 7 %REC	PA Method 5192 44995 LowLimit	8021B: Vola Units: mg/K HighLimit	tiles (g %RPD	RPDLimit	Qual
Sample ID MB-18423 Client ID: PBS Prep Date: 3/30/2015 Anatyte Benzene Toluene	Samp] Batcl Analysis [ Result ND ND	ype: ME n ID: 18 Date: 3/ PQL 0.050 0.050	3LK 423 31/2015 SPK value	Tes F SPK Ref Val	ICode: El RunNo: 2 GeqNo: 7 %REC	PA Method 5192 44995 LowLimit	8021B: Vola Units: mg/k HighLimit	tiles (g %RPD	RPDLimit	Qual
Sample ID MB-18423 Client ID: PBS Prep Date: 3/30/2015 Anatyte Benzene Toluene Ethylbenzene	Samp] Batcl Analysis [ Result ND ND ND	Type: ME n ID: 18 Date: 3/ PQL 0.050 0.050 0.050	3LK 423 31/2015 SPK value	Tes F SPK Ref Val	ICode: El RunNo: 2 GeqNo: 7 %REC	PA Method 5192 44995 LowLimit	8021B: Vola Units: mg/k HighLimit	tiles (g %RPD	RPDLimit	Quai
Sample ID MB-18423 Client ID: PBS Prep Date: 3/30/2015 Anatyte Benzene Toluene Ethylbenzene Xylenes, Total	Samp] Batcl Analysis [ Result ND ND ND ND	Type: ME n ID: 18 Date: 3/ PQL 0.050 0.050 0.050 0.10	3LK 423 31/2015 SPK value	Tes F SPK Ref Val	Code: El RunNo: 2 GeqNo: 7 %REC	PA Method 5192 44995 LowLimit	8021B: Vola Units: mg/k HighLimit	tiles (g %RPD	RPDLimit	Qual

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

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01-Apr-15

1503D62

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Analys 4901 Albuquerqu TEL: 505-345-3975 FAX: 5 Website: www.hallenviro	is Laboratory Hawkins NE e, NM 87109 05-345-4107 onmental.com	ample Log-In C	heck List
Client Name: BLAGG W	ork Order Number: 1503	D62	RcptNo	: 1
Received by/date: AT03/3/11T				
Logged By: Anne Thorne 3/31	/2015 8:45:00 AM	anne _	A-	
Completed By: Anne Thorne 3/31	/2015	anne -	H-	
Reviewed By:	23/31/15			
Chain of Custody				
1. Custody seals intact on sample bottles?	Yes	No No	Not Present	
2. Is Chain of Custody complete?	Yes	✓ No	Not Present	
3. How was the sample delivered?	Cour	ier		
Log In				
4. Was an attempt made to cool the samples?	Yes	No No		
5. Were all samples received at a temperature of >	0° C to 6.0°C Yes	No [		
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 pre-	eserved? Yes	✓ No		
9. Was preservative added to bottles?	Yes	No	NA 🗌	
10.VOA vials have zero headspace?	Yes	No	No VOA Viais 🗹	
11. Were any sample containers received broken?	Yes	No		
12. Does paperwork match bottle labels?	Yes	No No	# of preserved bottles checked for pH:	or >12 unless noted)
13 Are matrices correctly identified on Chain of Cust	ody? Yes	No No	Adjusted?	
14. Is it clear what analyses were requested?	Yes	No		
15. Were all holding times able to be met?	Yes	No	Checked by:	
Consist Handling (if applicable)				
16 Was client notified of all discrepancies with this of	mer? Vac			
	10511 105			7
Person Notified:		il 🔲 Phone 🥅 I	Eav. In Person	
Regarding:				
Client Instructions:	ander folkendelingen bilden auf ander einer einer eine delender auf der Bertalle der Bertalle der Bertalle einer	and a set of the set o	Name of the second difficulty of the second di	
17. Additional remarks:				
18. <u>Cooler Information</u> Cooler No. Temp °C. Condition. Seal In	tact Seal No Seal Da	ite Signed B		
			]	
Page 1 of 1				

С	hain-o	of-Cus	stody Record	Turn-Around	Time:	Same				н	AL	LI	EN	VII	RO	N	ME	NT	'AI	L
Client:	BLAG	G ENGR	/ BP AMERICA	Standard	Rush	(DAY)			6	A	N		/SI	SI		BO	RA	TC	R	Y
				Project Name					-	,	www	.hall	envir	onme	ental	.com	1			
Mailing A	ddress:	P.O. BO	X 87	wo	od ec	- + +		49	01 H	lawki	ins N	E - 4	Albuq	uerq	ue, N	NM 8	7109	)		
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50	)5-34	5-39	75	Fax	505	-345	-410	17			
Phone #:		(505) 63	32-1199									An	alysi	s Re	ques	st				
email or F	ax#:			Project Manag	ger:				3			Т	3				T		Т	$\top$
QA/QC Par	ckage: ard		Level 4 (Full Validation)		JEFF	BLAEG	(8021E	only)	town			12)	PO4.SO							e
Accreditat	tion:			Sampler:	NELSON	VELEZ	ns	(Gas	ROT	1	न	SIN	õ.	lids	red	z				du
		Other		Onlice	X Yes	DI No		Hall	0/0	418.	504.	8270	0	d So	filte	rite				e sa
	Гуре)			Sample Temp	erature:	0		+	(GR(	bo	po	or	CI.N	See	) sno	/ Nit			8	N osit
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	RIFX	STEX + MTE	<b>PH 8015B</b>	<b>IPH (Meth</b>	EDB (Meth	PAH (8310	Anions (F.	Fotal Disse	ron, Ferro	Vitrate N			Srab samp	pt. comp
3/30/15	0850	SOIL	3AC5'-15'(95-B)	4021	COOL		V		$\checkmark$									1		3
3/30/15	0968	2017	TH SO. DF 95-AC 11'	4021	COOL	-662	- 1	/	$\checkmark$											
Date: 3/30/15 Date: 3/30/15	Time: 1445 Time: 1855	Relinquist	ned by: Im J ned by:	Received by: Muntu Received by: Aban	Libero.	Date Time 3/36/15/144 Date Time 31/15 C845	Re Ţ	BILL Jeff Payk	DIRE Peace	ctly e, 200 ZEV	TO B Ener	P: rgy Co REME	Durt, F	armir	ngtor	) n, NM	8740	)1		



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 <u>www.hallenvironmental.com</u> 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,

and

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysi	s Labora	tory, In	IC.		Date Reported: 4/3/201	5
CLIENT: Blagg Engineering Project: Usselman GC 1 Lab ID: 1504068-001	Matrix:	SOIL	Client Sam Collection Received	ple ID: Ta 1 Date: 4/1 1 Date: 4/2	nk A N Wall 3-pt Con /2015 8:50:00 AM /2015 7:00:00 AM	ıp 5'-15'
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 RANG	GE				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.	В	Analyte detected in the associated Metho	od Blan
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	s excee
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Pa
	0	RSD is greater than RSDlimit	Р	Sample pH Not In Range	10
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	

- S Spike Recovery outside accepted recovery limits
- ık
- ded
- RL Reporting Detection Limit

age 1 of 6

Analytical Report
Lab Order 1504068
Date Reported: 4/3/2015

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering Project: Usselman GC 1

Lab ID: 1504068-002

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 Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE					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 RAI	NGE				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

Matrix: SOIL

### 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
		A THE THE TAX AT A THE TAX AT A TAX AT

- 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
- Page 2 of 6

Client: Blagg Engineering Project: Usselman GC 1

Sample ID MB-18493	SampType: MI	BLK	Tes	tCode: El	PA Method	300.0: Anion	S		
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: LC	s	Tes	tCode: El	PA Method	300.0: Anion	s		
Sample ID LCS-18493 Client ID: LCSS	SampType: LC Batch ID: 18	CS 493	Tes F	tCode: El	PA Method 5277	300.0: Anion	S		
Sample ID         LCS-18493           Client ID:         LCSS           Prep Date:         4/2/2015	SampType: LC Batch ID: 18 Analysis Date: 4	2S 493 /2/2015	Tes F S	tCode: EF RunNo: 2 SeqNo: 74	PA Method 5277 47466	300.0: Anion Units: mg/H	ls (g		
Sample ID LCS-18493 Client ID: LCSS Prep Date: 4/2/2015 Analyte	SampType: LC Batch ID: 18 Analysis Date: 4 Result PQL	CS 493 /2/2015 SPK value	Tes F S SPK Ref Val	tCode: EF RunNo: 29 SeqNo: 74 %REC	PA Method 5277 47466 LowLimit	300.0: Anion Units: mg/K HighLimit	s (g %RPD	RPDLimit	Qual

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

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03-Apr-15

# QC SUMMARY REPORT

WO#:

1504068 03-Apr-15

Client: Blagg Engineering Project: Usselman GC 1

Sample ID MB-18481	SampT	уре: МЕ	BLK	TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID: PBS	Batch	1D: 184	481	RunNo: 25239						
Prep Date: 4/2/2015	Analysis D	ate: 4/	2/2015	S	SeqNo: 746324 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	ND 11	10	10.00		110	63.5	128			
	SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics									
Sample ID LCS-18481	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Diese	el Range C	Drganics	
Sample ID LCS-18481 Client ID: LCSS	SampT Batch	ype: LC	S 481	Tesi	tCode: El	PA Method 5239	8015D: Diese	el Range C	Organics	
Sample ID LCS-18481 Client ID: LCSS Prep Date: 4/2/2015	SampT Batch Analysis D	ype: LC 1D: 184 Date: 4/	S 481 2/2015	Tesi R S	tCode: El tunNo: 2 GeqNo: 7	PA Method 5239 46325	8015D: Diese Units: mg/K	el Range C	Drganics	
Sample ID LCS-18481 Client ID: LCSS Prep Date: 4/2/2015 Analyte	SampT Batch Analysis D Result	ype: LC ID: 184 ate: 4/ PQL	S 481 2/2015 SPK value	Test R S SPK Ref Val	tCode: El tunNo: 2 GeqNo: 7 %REC	PA Method 5239 46325 LowLimit	8015D: Diese Units: mg/K HighLimit	el Range C g %RPD	<b>Drganics</b> RPDLimit	Qual
Sample ID LCS-18481 Client ID: LCSS Prep Date: 4/2/2015 Analyte Diesel Range Organics (DRO)	SampT Batch Analysis D Result 48	ype: LC n ID: 184 pate: 4/ PQL 10	S 481 2/2015 SPK value 50.00	Tesi R S SPK Ref Val 0	tCode: El tunNo: 2 GeqNo: 7 %REC 95.2	PA Method 5239 46325 LowLimit 67.8	8015D: Diese Units: mg/K HighLimit 130	el Range C Sg %RPD	<b>Drganics</b> RPDLimit	Qual

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

Page 4 of 6

Client:Blagg EngineeringProject:Usselman GC 1

Sample ID LCS-18462	SampType: LCS TestCode: EPA Method						8015D: Gaso	oline Rang	е			
Client ID: LCSS	Batch ID: 18462 RunNo: 25248											
Prep Date: 4/1/2015	Analysis Date: 4/2/2015 SeqNo: 746614						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	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e			
Client ID: PBS	Batch	1D: 18	462	F	RunNo: 2	5248						
Prep Date: 4/1/2015	Analysis D	ate: 4/	2/2015	S	SeqNo: 7	46615	Units: mg/M	٢g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Analyte Gasoline Range Organics (GRO)	Result ND	PQL 5.0	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

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

Page 5 of 6

03-Apr-15

### **QC SUMMARY REPORT**

### Hall Environmental Analysis Laboratory, Inc.

**Client:** Blagg Engineering **Project:** Usselman GC 1

Sample ID LCS-18462	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: 18	462	F	RunNo: 2	5248				
Prep Date: 4/1/2015	Analysis D	Date: 4/	2/2015	5	SeqNo: 7	46620	Units: mg/k	٢g		
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	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batcl	h ID: 18	462	F	RunNo: 2	5248				
Prep Date: 4/1/2015	Analysis E	Date: 4/	2/2015	S	SeqNo: 7	46621	Units: mg/k	(g		
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.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- RSD is greater than RSDlimit 0
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Ρ Sample pH Not In Range
- RL Reporting Detection Limit

Page 6 of 6

1504068 03-Apr-15

Clent Name:       BLAGG       Work Order Number:       1504068       Ropth         Received by/date:       ATT Off C2 // 5	nmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 45-3975 FAX: 505-345-4107 www.hallenvironmental.com
Received by/date:       ATTOUCE/IS         Logged By:       Anne Thome       4/2/2015 7:00:00 AM       Jace, Jace         Completed By:       Anne Thome       4/2/2015       Jace, Jace         Reviewed By:       OW b7/W       Jace, Jace       Jace, Jace         Chain of Custody       I. Custody seals intact on sample bottles?       Yes       No       Not Present         2. Is Chain of Custody complete?       Yes       No       Not Present       Not Present         3. How was the sample delivered?       Courier       Log In       No       Not Present         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       NA         7. Sufficient sample volume for indicated test(s)?       Yes       No       NA         9. Was preservative added to bottles?       Yes       No       No       NA         10. VCA viais have zero headspace?       Yes       No       Ma       Grapheter         11. Were any sample containers received broken?       Yes       No       Ma       Grapheter         12. Does paperwork match bottle labels?       Yes	lumber: 1504068 RcptNo: 1
Logged By:       Anne Thome       4/2/2015 7:00:00 AM       Jan. Jan.         Completed By:       Anne Thome       4/2/2015       Jan.         Reviewed By:       O'U by Jan.       O'U by Jan.       Jan.         Chain of Custody       I. Custody seals intact on sample bottles?       Yes       No       Not Present 5         2. Is Chain of Custody complete?       Yes       No       Not Present 5         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 tamperature of >0° C to 6.0°C       Yes       No       NA         6. Sample(s) in proper container(s)?       Yes       No       NA         7. Sufficient sample volume for indicated test(s)?       Yes       No       NA         9. Was preservative added to bottles?       Yes       No       NA         10. VOA viais have zero headspace?       Yes       No       No       Ma         11. Were any sample containers received broken?       Yes       No       Ma       Graduated?         12. Does paperwork match bottle labels?       Yes       No       Ma       Graduated?         13. Are matrices correctly identinfed on Chain of Custody?       Yes	
Completed By:       Anne Thome       4/2/2015       Anne M         Reviewed By:       OH b2/W       Image: Chain of Custody       No       Not Present 5         1. Custody seals intact on sample bottles?       Yes       No       Not Present 5         2. Is Chain of Custody complete?       Yes       No       Not Present 5         3. How was the sample delivered?       Courier       No       Not Present 5         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       NA         7. Sufficient sample volume for indicated test(s)?       Yes       No       NA         8. Are samples (except VQA and ONG) properly preserved?       Yes       No       NA         9. Was preservative added to bottles?       Yes       No       No       Image: Constraints received broken?         10. VCA visits have zero headspace?       Yes       No       Image: Constraints received broken?       Yes       No       Adjusted?         11. Ware any sample containers received broken?       Yes       No       Image: Constraints received broken?       Yes       No       Adjusted? <td< td=""><td>DAM ann Mm</td></td<>	DAM ann Mm
Reviewed By:       04/02/w         Chain of Custody       1. Custody seals intact on sample bottles?       Yes       No       Not Present 5         2. Is Chain of Custody complete?       Yes       No       Not Present 6         3. How was the sample delivered?       Courier         Loa In       4. Was an attempt made to cool the samples?       Yes       No       NA         5. Were all samples received at a tamperature of >0° C to 6.0°C       Yes       No       NA         6. Sample(s) in proper container(s)?       Yes       No       NA         7. Sufficient sample volume for indicated test(s)?       Yes       No       NA         8. Are samples (except VQA and ONG) properly preserved?       Yes       No       NA         9. Was preservative added to bottles?       Yes       No       No VOA Viais         10. VOA viais have zero headspace?       Yes       No       No VOA Viais         11. Were any sample containers received broken?       Yes       No       Adjusted?         12. Does paperwork match bottle labels?       Yes       No       Adjusted?         13. Are matrices correctly identified on Chain of Custody?       Yes       No       Adjusted?         14. Is it clear what analyses were requestod?       Yes       No       Checked b	anne Sham
Chain of Custody         1. Custody seals intact on sample bottles?       Yes       No       Not Present 5         2. Is Chain of Custody complete?       Yes       No       Not Present 5         3. How was the sample delivered?       Courier         Loca 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       NA         7. Sufficient sample volume for indicated test(s)?       Yes       No       NA         8. Are samples (except VQA and ONG) properly preserved?       Yes       No       NA         9. Was preservative added to bottles?       Yes       No       NA       If of preserved bottles for pH:         (Note discrepancies on chain of custody)       Yes       No       If of preserved bottles for pH:       (c         13. Are matrices correctly identified on Chain of Custody?       Yes       No       If of preserved bottles for pH:       (c         14. Is it clear what analyses were requested?       Yes       No       If of preserved bottles for pH:       (c         15. Were all holding times able to be met?       Yes       No       If of preserved bottles for pH:       (c	
1. Custody seals intact on sample bottles?       Yes       No       Not Present 6         2. Is Chain of Custody complete?       Yes       No       Not Present 6         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(a)?       Yes       No       NA         7. Sufficient sample volume for indicated test(s)?       Yes       No       NA         8. Are samples (except VQA and ONG) properly preserved?       Yes       No       NA         9. Was preservative added to bottles?       Yes       No       NA         10. VOA visits have zero headspace?       Yes       No       No       MA         11. Were any sample containers received broken?       Yes       No       Ma       doites checked for preserved         12. Does paperwork match bottle labels?       Yes       No       No       Adjusted?         14. Is it clear what analyses were requested?       Yes       No       Adjusted?         14. Is it clear what analyses were requested?       Yes       No       Adjusted?         15. Were all holding times able to be mel	
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       NA         7. Sufficient sample volume for indicated test(s)?       Yes       No       NA         8. Are samples (except VOA and ONG) property preserved?       Yes       No       NA         9. Was preservetive added to bottles?       Yes       No       NA         10. VOA vials have zero headspace?       Yes       No       No       If of preserved         11. Were any sample containers received broken?       Yes       No       If of preserved       for preserved         12. Does paperwork match bottle labels?       Yes       No       If of preserved       for preserved         12. In cell advises correctly identified on Chain of Custody?       Yes       No       If of preserved         13. Are matrices correctly identified on Chain of Custody?       Yes       No       If of checked by         14. Is it clear what analyses were requested?       Yes       No       If of checked by <td>Yes 🗌 No 🗌 Not Present 🗹</td>	Yes 🗌 No 🗌 Not Present 🗹
3. How was the sample delivered?       Courter         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 8.0°C       Yes       No       NA         6. Sample(s) in proper container(s)?       Yes       Yes       No       NA         7. Sufficient sample volume for indicated test(s)?       Yes       No       NA         8. Are samples (except VQA and ONG) properly preserved?       Yes       No       NA         9. Was preservative added to bottles?       Yes       No       NA         10. VOA visits have zero headspace?       Yes       No       Ma         11. Were any sample containers received broken?       Yes       No       Ma         12. Does paperwork match bottle labels?       Yes       No       Ma         (Note discrepancies on chain of custody)       Yes       No       Ma         13. Are matrices correctly identified on Chain of Custody?       Yes       No       Ma         14. Is it clear what analyses were requested?       Yes       No       Ma         15. Were all holding times able to be met?       Yes       No       Na         16. Was client notified of all discrepancies with this order?       Yes       No       Na	Yes 🗹 No 🗌 Not Present
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       Yes       No       NA         7. Sufficient sample volume for indicated test(s)?       Yes       No       NA         8. Are samples (except VOA and ONG) properly preserved?       Yes       No       NA         9. Was preservative added to bottles?       Yes       No       NA         10. VOA vials have zero headspace?       Yes       No       Ma         11. Were any sample containers received broken?       Yes       No       # of preserved bottles for pre-         12. Does paperwork match bottle labels?       Yes       No       # of preserved bottles for pri-         (Note discrepancies on chain of custody)       Yes       No       # of preserved bottles for pri-         13. Are matrices correctly identified on Chain of Custody?       Yes       No       Adjusted?         14. Is it clear what analyses were requested?       Yes       No       No         15. Were all holding times able to be met?       Yes       No       NA         16. Wes client notified of all discrepancies with this order?       Yes       No <td>Courier</td>	Courier
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       NA         7. Sufficient sample volume for indicated test(s)?       Yes       ✓       No          8. Are samples (except VQA 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        No ✓       # of preserved bottles checked for pH:         (Note discrepancies on chain of custody)       Yes       No         # of preserved bottles checked for pH:         (4. Is it clear what analyses were requested?       Yes       No            15. Were all holding times able to be met?       Yes       No            16. Were all nottified of all discrepancies with this order?       Yes       No        NA S         Person	
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       No         7. Sufficient sample volume for indicated test(s)?       Yes       No          8. Are samples (except VQA and ONG) properly preserved?       Yes       No          9. Was preservative added to bottles?       Yes       No          10. VOA vials have zero headspace?       Yes       No          11. Were any sample containers received broken?       Yes       No          12. Does paperwork match bottle labels?       Yes       No        # of preserved         12. Does paperwork match bottle labels?       Yes       No        # dipreserved         13. Are matrices correctly identified on Chain of Custody?       Yes       No        Adjusted?         14. Is i clear what analyses were requested?       Yes       No        Checked by         15. Were all holding times able to be met?       Yes       No       No       Na       Secondary         16. Was client notified:       Date	Yes 🗹 No 🗌 NA 🗌
6. Sample(s) in proper container(s)? Yes Yes No   7. Sufficient sample volume for indicated test(s)? Yes No   8. Are samples (except VQA and ONG) properly preserved? Yes No   9. Was preservative added to bottles? Yes No   10. VOA vials have zero headspace? Yes No   11. Were any sample containers received broken? Yes No   12. Does paperwork match bottle labels? Yes No   (Note discrepancies on chain of custody) for pH: (for pH:   (13. Are matrices correctly identified on Chain of Custody? Yes No   (14. Is it clear what analyses were requested? Yes No   (15. Were all holding times able to be met? Yes No   (If no, notify customer for authorization.) Date	C Yes 🗹 No 🗌 NA 🗌
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   10. VOA vials have zero headspace? Yes No   11. Were any sample containers received broken? Yes No   12. Does paperwork match bottle labels? Yes No   (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? Yes No   (if no, notify customer for authorization.) Date	Yes 🗹 No 🗌
8. Are samples (except VOA and ONG) property preserved? Yes No   9. Was preservative added to bottles? Yes No NA   10. VOA vials have zero headspace? Yes No No VOA Vials   11. Were any sample containers received broken? Yes No # of preserved bottles checked for pH:   (Note discrepancies on chain of custody) Yes No # of preserved bottles checked for pH:   (Note discrepancies on chain of custody) Yes No Adjusted?   13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?   14. Is it clear what analyses were requested? Yes No Checked by   15. Were all holding times able to be met? Yes No Checked by   (if no, notify customer for authorization.) Special Handling (if applicable) Date	Yes 🗹 No 🗌
9. Was preservative added to bottles? Yes No NA   10. VOA vials have zero headspace? Yes No No No VOA Vials   11. Were any sample containers received broken? Yes No If of preserved bottles checked for pH:   12. Does paperwork match bottle labels? Yes No If of preserved bottles checked for pH:   13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?   14. Is it clear what analyses were requested? Yes No Checked bottles   15. Were all holding times able to be met? Yes No Checked bottle   16. Was client notified of all discrepancies with this order? Yes No NA   If a pplicable Date If applicable If applicable   16. Was client notified: Date If applicable   17. Additional remarks: If a cooler Information Cooler No. Yes   18. Cooler Information Cooler No. Seal Intext [Seal No] Seal Date	Yes 🗹 No 🗌
10. VOA vials have zero headspace?       Yes       No       No VOA Vials         11. Were any sample containers received broken?       Yes       No       # of preserved bottle         12. Does paperwork match bottle labels?       Yes       No       # of preserved bottles checked for pH:         (Note discrepancies on chain of custody)       Yes       No       Adjusted?         13. Are matrices correctly identified on Chain of Custody?       Yes       No       Adjusted?         14. Is it clear what analyses were requested?       Yes       No       Adjusted?         15. Were all holding times able to be met?       Yes       No       Checked by         (If no, notify customer for authorization.)       Yes       No       NA       Second the sec	Yes 🗋 No 🗹 NA 🗌
11. Were any sample containers received broken?       Yes       No       # of preserved bottles checked for pH:         12. Does paperwork match bottle labels?       Yes       No       # of preserved bottles checked for pH:         (Note discrepancies on chain of custody)       Yes       No       # of preserved bottles checked for pH:         (Note discrepancies on chain of custody)       Yes       No       Adjusted?         13. Are matrices correctly identified on Chain of Custody?       Yes       No       Adjusted?         14. Is it clear what analyses were requested?       Yes       No       Adjusted?         15. Were all holding times able to be met?       Yes       No       Checked by         (if no, notify customer for authorization.)       Yes       No       No       NA         Special Handling (if applicable)       If a policable       If a policable       If a policable         16. Was client notified:       Date	Yes 🗌 No 🗌 No VOA Vials 🗹
12. Does paperwork match bottle labels?       Yes       No       bottles checked for pH:         (Note discrepancies on chain of custody)       Yes       No       Adjusted?         13. Are matrices correctly identified on Chain of Custody?       Yes       No       Adjusted?         14. Is it clear what analyses were requested?       Yes       No       Adjusted?         15. Were all holding times able to be met?       Yes       No       Checked by         (If no, notify customer for authorization.)       Yes       No       NA         Special Handling (If applicable)       Isomer for authorization.)       No       NA         I6. Was client notified of all discrepancies with this order?       Yes       No       NA         By Whom:       Via:       eMail       Phone       Fax       In Person         Regarding:       Client Instructions:       In Person       Seal Intact       Seal No       Seal Date       Signed By         10.       Good       Yes       Yes       Seal Date       Signed By       Signed By	Yes No 🗹
12. Does paperwork match bottle labels?       Yes       Yes       No       Tor pH:         (Note discrepancies on chain of custody)       Yes       No       Adjusted?         13. Are matrices correctly identified on Chain of Custody?       Yes       No       Adjusted?         14. Is it clear what analyses were requested?       Yes       No       Adjusted?         14. Is it clear what analyses were requested?       Yes       No       Checked by         15. Were all holding times able to be met?       Yes       No       Checked by         15. Were all holding times able to be met?       Yes       No       Checked by         (if no, notify customer for authorization.)       Yes       No       NA         Special Handling (if applicable)       In Person Notified:       Date       In Person         16. Was client notified:       Date       Date       In Person         Regarding:       Client Instructions:       Via:       eMail       Phone       Fax       In Person         17. Additional remarks:       In Cooler Information       Seal Intact       Seal Date       Signed By       Signed By	bottles checked
13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?   14. Is it clear what analyses were requested? Yes No Checked b   15. Were all holding times able to be met? Yes No Checked b   15. Were all holding times able to be met? Yes No Checked b   16. Was client notified of all discrepancies with this order? Yes No NA   16. Was client notified: Date Image: Client Instructions: Image: Client Instructions:   17. Additional remarks: Image: Client Instructions: Seal Intact Seal No Seal Date	Yes M No ⊥ Tor prt. (<2 or >12 unless noted)
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 b         15. Were all holding times able to be met? (If no, notify customer for authorization.)       Yes       No       Checked b         16. Was client notified of all discrepancies with this order?       Yes       No       NA       NA         16. Was client notified:       Date       Date       NA       NA         16. Was client notified:       Date       Date       NA       NA         16. Was client notified:       Date       Date       NA       NA         17. Additional remarks:       Na       Na       Na       Na       Na       Na         18. Cooler No       Temp %C       Condition       Seal Intact       Seal No       Seal Date       Signed By	Yes V No Adjusted?
15. Were all holding times able to be met?       Yes       No       Checked by         (If no, notify customer for authorization.)       Person Notified of all discrepancies with this order?       Yes       No       NA         I6. Was client notified of all discrepancies with this order?       Yes       No       NA       NA         Person Notified:       Date	Yes V No
(If no, notify customer for authorization.)         ipecial Handling (if applicable)         (6. Was client notified of all discrepancies with this order?         Yes       No         No       NA         Person Notified:       Date         By Whom:       Via:         Regarding:       Client Instructions:         If Additional remarks:         8.       Cooler Information         Cooler No       Temp *C         Condition       Seal Intact         Seal Intact       Seal No	Yes 🗹 No 🗌 Checked by:
16. Was client notified of all discrepancies with this order?       Yes       No       NA         Person Notified:       Date	
Person Notified:       Date         By Whom:       Via:         Regarding:       Client Instructions:         Client Instructions:       In Person         17. Additional remarks:       Interval         18. Cooler Information       Cooler Information         Cooler No       Temp *C         Condition       Seal Intact         Seal Date       Signed By	
By Whom:       Via:       eMail       Phone       Fax       In Person         Regarding:       Client Instructions:       Intervention       Intervention       Intervention         17. Additional remarks:       Intervention       Intervention       Intervention       Intervention         Image: Cooler Information       Image: Cooler Information       Intervention       Intervention       Intervention         Intervention       Intervention       Intervention       Intervention       Intervention       Intervention         Intervention       Intervention       Intervention       Intervention       Intervention       Intervention         Intervention       Intervention       Intervention       Intervention       Intervention       Intervention	Date
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17. Additional remarks: 8. <u>Cooler Information</u> <u>Cooler No. Temp *C Condition Seal Intact Seal No. Seal Date Signed By</u>	annan ann an 110 ann an ann an a' à dheala an an ann an ann an ann an ann a' Ann an a' Ann an ann a' Ann an an
8. <u>Cooler Information</u> <u>Cooler No. Temp *C</u> Condition Seal Intact Seal No. Seal Date Signed By	
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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

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

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 <u>www.hallenvironmental.com</u> 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical	Report
Lab Order 1:	504131

Date Reported: 4/7/2015

Page 1 of 8

### Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Blagg Engineering			C	lient Sam	ple ID: S	Wall-W 3-pt 5'-15'	
<b>Project:</b>	Usselman GC 1				Collection	n Date: 4/2	2/2015 8:20:00 AM	
Lab ID:	1504131-001	Matrix:	SOIL		Received	d Date: 4/3	3/2015 7:55:00 AM	
Analyses		Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015D: DIESEL RANGE O	RGANICS					Analys	BCN
Diesel Ra	ange Organics (DRO)	46	9.8		mg/Kg	1	4/3/2015 10:52:50 AM	18504
Surr: D	NOP	117	63.5-128		%REC	1	4/3/2015 10:52:50 AM	18504
EPA MET	HOD 8015D: GASOLINE RANG	E					Analyst	RAA
Gasoline	Range Organics (GRO)	6.8	3.7		mg/Kg	1	4/3/2015 10:38:45 AM	18491
Surr: E	BFB	152	80-120	S	%REC	1	4/3/2015 10:38:45 AM	18491
EPA MET	HOD 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
Ethylbenz	zene	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 MET	HOD 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.	В	Analyte detected in the associated Metho	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Dage
	0	RSD is greater than RSDlimit	Р	Sample pH Not In Range	1 age
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	

S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis	s Labora	atory, In	ic.		Date Reported: 4/7/201	5
CLIENT: Blagg Engineering Project: Usselman GC 1 Lab ID: 1504131-002	Matrix:	SOIL	Client Sampl Collection I Received I	e ID: W Date: 4/2 Date: 4/3	Wall-S 3-pt 5'-15' 2/2015 8:25:00 AM 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 RANG	GE				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. E Value above quantitation range
- Analyte detected below quantitation limits J
- 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
- Sample pH Not In Range Р
- RL Reporting Detection Limit
- Page 2 of 8

Hall Environmental Analys	is Labora	tory, In	с.		Date Reported: 4/7/201	5
CLIENT: Blagg EngineeringProject: Usselman GC 1Lab ID: 1504131-003	Matrix:	SOIL	Client Sampl Collection I Received I	e ID: W Date: 4/2 Date: 4/3	Wall-N 3-pt 5'-15' 2/2015 8:30:00 AM 2/2015 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 RAN	IGE				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	ma/Ka	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.

O	18	lifi	ier	S	:
V.	14			э	

\*

- 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

Page 3 of 8

RL Reporting Detection Limit

Hall Environmental Analys	is Labora	tory, Ir	ic.		Date Reported: 4/7/201	5
CLIENT: Blagg Engineering Project: Usselman GC 1			Client San	ple ID: S	Wall-E 3-pt 5'-15'	
Lab ID: 1504131-004	Matrix:	SOIL	Receive	d Date: 4/3	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 RAN	GE				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.

			00	
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associa

- 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 Page 4 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit

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 v	alue 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		
Sample ID LCS-18510 Client ID: LCSS	SampType: LCS Batch ID: 18510	TestCode: EPA Method RunNo: 25318	300.0: Anions		
Sample ID LCS-18510 Client ID: LCSS Prep Date: 4/3/2015	SampType: LCS Batch ID: 18510 Analysis Date: 4/3/2015	TestCode: EPA Method RunNo: 25318 SeqNo: 749018	<b>300.0: Anions</b> Units: <b>mg/Kg</b>		
Sample ID LCS-18510 Client ID: LCSS Prep Date: 4/3/2015 Analyte	SampType: LCS Batch ID: 18510 Analysis Date: 4/3/2015 Result PQL SPK v	TestCode: <b>EPA Method</b> RunNo: <b>25318</b> SeqNo: <b>749018</b> alue SPK Ref Val %REC LowLimit	<b>300.0: Anions</b> Units: <b>mg/Kg</b> HighLimit %RPD	RPDLimit	Qual

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

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1504131 *07-Apr-15* 

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

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

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07-Apr-15

1504131

Client: Blagg Engineering Project: Usselman GC 1

Sample ID MB-18491	SampTy	vpe: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch	ID: 18	491	F	RunNo: 2	5280				
Prep Date: 4/2/2015	Analysis Da	ate: 4/	3/2015	S	SeqNo: 7	47586	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 890	5.0	1000		89.4	80	120			
Sample ID LCS-18491	SampTy	pe: LC	S	Test	tCode: El	PA Method	8015D: Gasc	line Rang	e	
Sample ID LCS-18491 Client ID: LCSS	SampTy Batch	/pe: LC	S 491	Test	tCode: El RunNo: 2	PA Method 5280	8015D: Gaso	line Rang	e	
Sample ID LCS-18491 Client ID: LCSS Prep Date: 4/2/2015	SampTy Batch Analysis Da	rpe: LC ID: 184 ate: 4/	S 491 3/2015	Test R S	tCode: El RunNo: 2 SeqNo: 74	PA Method 5280 48019	8015D: Gaso Units: mg/K	oline Rang	e	
Sample ID LCS-18491 Client ID: LCSS Prep Date: 4/2/2015 Analyte	SampTy Batch Analysis Da Result	rpe: LC ID: 184 ate: 4/ PQL	S 491 3/2015 SPK value	Test R SPK Ref Val	tCode: El RunNo: 2 SeqNo: 7 %REC	PA Method 5280 48019 LowLimit	8015D: Gaso Units: mg/K HighLimit	oline Rang Kg %RPD	e RPDLimit	Qual
Sample ID LCS-18491 Client ID: LCSS Prep Date: 4/2/2015 Analyte Gasoline Range Organics (GRO)	SampTy Batch Analysis Da Result 26	rpe: LC ID: 184 ate: 4/ PQL 5.0	<b>S</b> 491 3/2015 SPK value 25.00	Tesi R S SPK Ref Val 0	tCode: El RunNo: 2 SeqNo: 7 %REC 102	PA Method 5280 48019 LowLimit 64	8015D: Gaso Units: mg/K HighLimit 130	Sine Rang	e RPDLimit	Qual

#### 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

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WO#: 1504131 07-Apr-15

Client: Blagg Engineering Project: Usselman GC 1

=

Sample ID MB-18491	Samp	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	h ID: 18	491	F	RunNo: 2	5280				
Prep Date: 4/2/2015	Analysis [	Date: 4/	3/2015	5	SeqNo: 7	47612	Units: mg/M	g		
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	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batc	h ID: 18	491	F	RunNo: 2	5280				
Prep Date: 4/2/2015	Analysis [	Date: 4/	3/2015	S	SeqNo: 7	48045	Units: mg/K	g		
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: A-Bromofluorobenzene	11		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

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1504131 07-Apr-15

HALL Hall Environmental ENVIRONMENTAL ANALYSIS LABORATORY TEL: 505-345-397. Website: www.h	l Analysis Laborator 4901 Hawkins N buquerque, NM 8710 5 FAX: 505-345-410 allenvironmental.co	ry NE 09 <b>Sam</b> 07	ple Log-In Check List
Client Name: BLAGG Work Order Number	r: 1504131		RcptNo: 1
Received by/date: AT 04/03/15			
Logged By: Anne Thorne 4/3/2015 7:55:00 AM		ame Im	-
Completed By: Anne Thorne 4/3/2015 Reviewed By: CS 04/03/15		anne Ann	-
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?	<u>Courier</u>		
Log In			
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗌	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗌	
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌	
7. Sufficient sample volume for indicated test(s)?	Yes 🖌	No 🗌	
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗌	
9. Was preservative added to bottles?	Yes	No 🗹	NA 🗌
10.VOA vials have zero headspace?	Yes	No 🗌	No VOA Vials 🗹
11. Were any sample containers received broken?	Yes	No 🗹	# of preserved
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🗆	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)

Was client notified of all dis	crepancies with this order?	Yes	□ No	<b>b</b>	NA	✓
Person Notified:		Date				
By Whom:		Via: 🗌 eM	all Phone	Fax	In Person	
Regarding:				14.3.		
Client Instructions:	S					

17. Additional remarks:

18. Cooler Information

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

Page 1 of 1

С	hain-	of-Cu	stody Record	Turn-Around	Time:	SAME DA	٢							E	MM	ТЕ	0		4F	NT	'A I	
Client:	Int: BP America			Standard	Rush						A	N	AL	YS	IS	5 L	AE	30	R/	TC	R	Y
1	ZNI	Fugite	agent of	Project Name	): 			www.hallenvironmental.com														
Mailing	ling Address:			- USSELMAN GC 1				4901 Hawkins NE - Albuquerque NM 87109														
				Project #:					Те	1. 50	5-34	5-39	975	F	ax	505-	345-	4107	7			
Phone	ne#: 505-320-(183							Analysis Request														
email o	r Fax#:			Project Mana	ger:			()	(July)	Â					04)							
QA/QC	QA/QC Package:			JE	X.A.66	÷		(802	as o				(SN		O4,S	CB's						
Stan	dard		Level 4 (Full Validation)	7	F P			16	E) H	BRO			SIN		D2,P	82 F						
	AP	□ Othe	r	Sampler:	- DLAG			Ħ	E H	0	8.1	4.1	827(		3,N(	/ 80		(A				or N)
	(Type)			Sample Tem	perature:	1.0		H	Ш	ED)	d 4	od 50	0 or	tals	UNC)	ides	(1	9	SI DE			2
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALING	o.	BTEX + ALT	BTEX + MT	TPH 8015B	TPH (Metho	EDB (Metho	PAH's (8310	RCRA 8 Me	Anions (F,C	8081 Pestic	8260B (VO/	8270 (Semi	CHLO			Air Bubbles
1/2hois	0820	SOIL	SOUTH WALL - WEST 3-PE 5-15	402 ×1	Loui	-(	(0)	x		x									x			
и	0825	и	WEST Wall - South 3-pt 5-15	4	u .	-	102	X		×									x			
и	0830	4	WEST Well-Naeth 3-Dt 5'-15'	Ef	٤١	-	103	x		×									×			
1(	1307	H	South Wall - CAST 3-pt 5-15	21	11		04	×		×		_							x		_	-
										_												
Date:	Time: 1416	Relinquish	U Blagg	Received by:	uldelt		me 416	Ren	narks	s: (	BILL	- B	P ] ]	EFA		AEE	EM	E				
Date:	ate: Time: Relinquished by: 2/15 1740 Matulalta			Received by	2m De	104/03/03	755	_				-	- 2	50	10	IK			÷			

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.

BL P.0 (50	AGG . BOX 8 5) 632	ENG 37, BL -1199	INEE oomfie	CRING, INC. Page <u>1</u> of <u>1</u> ELD, NM 87413
FIE	LD BC	RINC	G LOO	G BORING ID: GP-1
PRDJE CLIEN DRILL EQUIP DATE TDTAL CDMME	ING CON MENT US START: 1 DEPTH: NTS: 18	BP: Us merica P TRACTO SED: 22/2019 2/2 DUE S	ESELMAN Production IR: Kyv Geo Pro Z DATE CASI CASI	GC 1 on Co. rek be w/4 LONG × 14 DIA PUC SUEEVES FINISH: 1/22/15 DRILLER: KP LOGGED BY: JB ING TYPE & SIZE: - SLOT SIZE: - 95 Det Center
FEET	SAMPLE TIME	SAMPLE TYPE		SAMPLE DESCRIPTION
	0835	SLEEVE	STAAT	SILTY SANGE CLAY
	0945		STOP	COBBLES - CO. Id not PRNetverte Refusal
5'				
10				
10 -				
-				
15'				
20-				
			1	
25'				
30				

BLAG P.O. BO (505) 63	G ENG 87, BL 82-1199	INEE .00mfie	CRING, INC. Page <u>1</u> of <u>1</u> ELD, NM 87413								
FIELD H	FIELD BORING LOG BORING ID: GP-Z										
PROJECT: BP: Usselman GC 1 CLIENT: BP America Production Co. DRILLING CONTRACTOR: Kyvek EQUIPMENT USED: Geologie of 4 Long × 1/4 Dia PVC Slerves DATE START: 1/22/15 DATE FINISH: DRILLER: KP LOGGED BY: JCB TOTAL DEPTH: 11 CASING TYPE & SIZE: SLOT SIZE: COMMENTS: 30 Dre Sorth of BGT Conterned BGT Conterned BGT											
DEPTH SAMPL FEET TIME	E SAMPLE TYPE	OVM	SAMPLE DESCRIPTION								
0854	Sleeve	Start 0.0	Receiver i' silty-Sandy clay- No HC Obok - Davk Brown.								
-10 - T	2H=0.0	0.1	Recover 4' SAA, MOIST								
15'		0.1	Recover 3 SAA, ALMOST Sortworthe 10-11 COBBLES - REFUSAL								
25'											
30											

BL P.0 (50	AGG BOX 5) 632	ENG 87, BL -1199	INEE 00mf1e	ERING, INC. Page <u>1</u> of <u>1</u> ELD, NM 87413
FIE	LD BC	DRINC	LO(	G BORING ID: GP-3
CLIEN DRILL EQUIP	T: BP A	merica P ITRACTO SED: G	R: Kyv	w/ 4 x 12 - PUC Sleeve
DATE : TOTAL COMME	DEPTH	11/2	DATE CASI	FINISH 1/22/15 DRILLER KP LOGGED BY: JB
DEPTH FEET	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	0110	NEEVE	STRET	
5'	0922		0.0	Recover 12" Silty Sandy Clay, Dank Brown, No HC Ober
10	0939		0,2	RECOVER 30", SAA, increased Moisturp
- 10 -	0744	TPH=	0.0 0.1	Recover 30", SAA Increased Muistre to Almost Saturited, COBBLES - Refised
15'				
-20-				
25'				
30				. ·

BL P.0 (50	AGG BOX 8 5) 632-	ENG 37, BL0 -1199	INEE Domfie	CRING, INC. Page <u>1</u> of <u>1</u> CLD, NM 87413
FIEI	D BC	RING	LOC	G BORING ID: <u>GP-4</u>
PROJE CLIEN DRILL EQUIP DATE S TOTAL COMMEN	CT: T: <u>BP</u> Ar ING CON MENT US START: <u>I</u> DEPTH: US: <u>3</u>	BP: Us merica P TRACTO ED: C il 22 /win il 1/2 2 Wast	selman ( roduction R: Kyv See Probe 5 DATE CASI T of G	SC 1 SC 1
FEET	SAMPLE	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
5'	0952	Sieeve	STACT	Recover 30" Silty Sandy Clay, Dark Brown, NO HC ODUR.
10	1006		0.2	Recover 36" SAA, Increased Moisture
- 10 -	<u>(014</u>	TPH	= <mark>0.0</mark> 0.i	Recows 4'- 544- Almat Saturated @ 9'1 SOBBLES - Refuel
15'				
20-				
25'			,	
30				

BL P.0 (50	AGG . BOX 5) 632	ENG 87, BL -1199	INEE Domfie	CRING, INC. Page 1 of 1 ELD, NM 87413
FIEI	LD BO	RING	LOC	G BORING ID: GP-5
PROJE CLIEN DRILL EQUIP DATE TOTAL COMME	T: <u>BP</u> A ING CON MENT US START: DEPTH NTS: 41	BP: Us merica P ITRACTO SED: Ge 22/2015 IL 2 We	selman ( roduction R: <u>Kyv</u> DProber DATE DATE CASI	SC 1 Sn Co. ek $\sqrt{4' \times 1' 4'' Pvc Sleeves}$ FINISH: <u>1/22/2005</u> DRILLER: <u>KP</u> LOGGED BY: <u>JB</u> NG TYPE & SIZE: <u>SLOT SIZE</u> : <u>SLOT SIZE</u> :
FEET	SAMPLE	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	1022	Sleeve	57A2T	2 and cilling and in the Participant
5'	1030 T	PH = 1	1,204 p	Recover 30" silty sandly clay, HC Obor, Gray Statu 7'-8"
10	1033	FH=3,	419	Recover 30 - Silty Sandy Clay, Dark Gray, HC Obor
15'				COBRLES- Refusal
20-				
25'				
30				

LITE		DING	TO	
FIE.	LD BC	ORING	i LO	G BORING ID: <u>GP-6</u>
PROJ	T PD A	BP: Us	selman	
DRILL	ING CON	TRACTO	R: Kyv	rek
EQUIP	MENT US	SED:	Geo Prol	Se w/ 4' x 1'4" PUC SIPPLYS
DATE	DEPTH	12/2015	DATE	FINISH 1/22/2015 DRILLER: KP LOGGED BY JCB
COMME	NTS: L	E inte	+ ./	
DEPTH	SAMPLE	SAMPLE	TY	67-2
FEET	TIME	TYPE	OVM	SAMPLE DESCRIPTION
	1042		Start	
	1046		0.1	Recover 12" Silty Sandy Clay, Dark Brown, No HC OD.
5'			0.11	
	1048		0,6	Recover 4 SAA, Increased Moistine
10				
-10 -		TDU	EAA -	
	1053	IPH	=544 p	
	(1033		10	Recover 40 silty Sondy Clay, Gray w/ HC Obok 11-12
				CODDIOS @ 12 - Petisel
15'				)
			-	
-				
20-				
			ε	
25'				
-				

the second

BL P.0 (50	BLAGG ENGINEERING, INC. Page <u>1</u> of <u>1</u> P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199									
FIEI	FIELD BORING LOG BORING ID: GP-7									
PROJE CLIEN DRILL EQUIP DATE S TOTAL COMME	PROJECT: <u>BP</u> : Usselman GC 1 CLIENT: <u>BP America Production Co.</u> DRILLING CONTRACTOR: <u>Kyvek</u> EQUIPMENT USED: <u>GeoProbe</u> <u>w/4' × 1'4" PVC Sleeves</u> DATE START: <u>1/22/2015</u> DATE FINISH: <u>1/22/2015</u> DRILLER: <u>KP</u> LOGGED BY: <u>JB</u> TOTAL DEPTH: <u>11</u> CASING TYPE & SIZE: <u>SLOT SIZE</u> : COMMENTS: <u>82</u> West <u>d</u> GP-2									
FEET	SAMPLE TIME	TYPE		SAMPLE DESCRIPTION						
	1105	Sleeve	start	Rec 112" cille So & class Jack Foren die 115 Abor						
5'	1112		0,0	Recover 40 SITY Line y Club, Mart 19						
10		TPH-	0.0							
15'	8		0.1	Recover 40", SAA, Minust Saturde C 10 ± COBRES C 11 - Refisel						
25'										
30										

,

BL P.0 (50	AGG . box 8 5) 632-	ENG 87, BL( -1199	INEE Domfie	ERING, INC. Page <u>1</u> of <u>1</u> ELD, NM 87413
FIEI	D BC	RING	LO	G BORING ID: <u>GP-8</u>
PROJE CLIEN DRILL EQUIP DATE S TOTAL COMMEN	T: <u>BP</u> AN ING CON MENT US START: <u>I</u> DEPTH: NTS: <u>I</u> S	BP: US merica P TRACTO SED: 12/2015 11	selman I roductio R: <u>Kyv</u> Geo Pro DATE CASI d Gf	GC 1 on Co. Vek be w/4'x 1'4" PVC SLEEVEN FINISH: 1/22/2015 DRILLER: KNP LOGGED BY: JB ING TYPE & SIZE:
DEPTH	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION
	1150	DIEEVE	31A6	Recover 48" silty Sandy clay, Dark Brown, No HC ODDR
-10	i158 1204	TPH=	<u>0.0</u>	Recover 40 "SAA, increased Moisture Recover 40" SAA, Almost Saturadel @ 10 Cobbles-Refusal
20 -				
25'				
30				

BL P.0 (50	BLAGG ENGINEERING, INC. Page 1 of 1 P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199								
FIE PROJECLIEN DRILL EQUIP DATE TOTAL COMME	FIELD BORING LOG       BORING ID: <u>GP-9</u> PRDJECT:       BP: Usselman GC 1         CLIENT:       BP America Production Co.         DRILLING CONTRACTOR:       Kyvek         EQUIPMENT USED:       GeoProde w/ 4'x 1'4" Pvc Sleves         DATE START:       1/22/15         DATE START:       1/22/15         DATE START:       9'         CASING TYPE & SIZE:       SLOT SIZE:         COMMENTS:       1/21/15								
DEPTH	SAMPLE	SAMPLE	OUM	SAMPLE DESCRIPTION					
<u>ц</u> ,	1225	sleeve.	57ANT 0.0	Recover 18" Sitty Sandy Clay, Dark Brown, No HC ODUR					
	1240 TI _1244	PH=0.0	0.1	Recover 48" SAA, Increased Moster? Recover 12" SAA					
-10 -				COBBLES C. 9" Refused					
-20-									
30									

BLAGG ENGINEERING, INC. Page 1 of 1 P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199						
FIE	LD BC	RING	LO	G BORING ID: GP-12		
PROJE CLIEN DRILL EQUIP DATE TOTAL COMME	ECT: IT: BP AN ING CON MENT US START: 1/1 DEPTH: NTS: 2:	BP: Us merica P TRACTO SED: G 13/2015 14 5 Sam	selman ( roduction R: Kyv BO P:20B DATE CASI	GC 1 on Co. rek E w/ 4'x 1 <sup>4</sup> · PVC Sleever FINISH: <u>1/23/2015</u> DRILLER: <u>KOP</u> LOGGED BY: <u>JB</u> ING TYPE & SIZE: <u>SLOT SIZE</u> : <u>SCORE</u> Fence		
DEPTH	SAMPLE TIME	SAMPLE TYPE	OVM	SAMPLE DESCRIPTION		
	1015	SLEEVE		S TART		
5'	1020		0.0	RECOVER 24" Silty Soudy Clay, DARK Brown, NO HC ODOR.		
-10 -	1023		0.1	Recover 36; SAA, increased Moisture		
15'	1631 TPH= 1036	=15 pp	0.3 m 0.2	RECOVER 48", SAA, V. MOIST RECOVER 6" ORUSHED ROCK REFUSAL - COBBUEL		
-20 -			* *			
251			×			
	••••••					
30						

BL	BLAGG ENGINEERING, INC. Page 1 of 1							
P.0	P.O. BOX 87, BLOOMFIELD, NM 87413							
(50	(505) 632-1199							
FIEI	FIELD BORING LOG BORING ID: 6P-13							
PROJE	PRT IFCT: BPI Usselman GC 1							
CLIEN	CLIENT: BP America Production Co.							
DRILL	ING CON	TRACTO	RI Kyv	ek				
DATE S	START 1/	23/15	DATE	FINISH: 1/23/15 DRILLER: KP LOGGED BY: JCB				
TOTAL	DEPTH	12-	CASI	NG TYPE & SIZE: SLOT SIZE:				
COMME	NTS: 12"	SOUTH	of 6-F	>-5 (About 7' South of Pastice Fence)				
DEPTH	SAMPLE	SAMPLE	101/14	SAMPLE DESCRIPTION				
FEE!	TIME	TYPE	OVM STAT					
	10.0	Sieme	\$ 1540					
	1053	0.1		Recover 36, Yellow coarse Grained Sand, NO HC ODOL.				
5'								
	1057	0.1		RECOVER 36 SAA				
-10 -								
	TPH	= 1,33	7 ppm	2 10 TOA, 115-17' Sith South Chy Group US OLD				
	1102	228	-	CORRECT Day 10 SAA 112 10 STAY CALL, OVAY, HE ODOR				
-				course retroit				
15/								
15								
00								
-50-	********							
25'								
30								

BLAGG ENGINEERING, INC. Page 1 of 1 P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199									
FIE	FIELD BORING LOG BORING ID: GP-14								
PROJI CLIEN DRILL EQUIP DATE TOTAL COMME	PROJECT:       BP: Usselman GC 1         CLIENT:       BP America Production Co.         DRILLING CONTRACTOR:       Kyvek         EQUIPMENT USED:       GEO Pagge         DATE START:       1/23/2015         DATE START:       1/25         CASING TYPE & SIZE:								
DEPTH	SAMPLE	SAMPLE TYPE		SAMPLE DESCRIPTION					
5'	i120	5/42-42	StACT 0.0	Recover 36 - Silty SANDE Clark, Dark Brown, No HC ODOR					
-10 -	1124		0.1	SAA, Recover 36, NO HC ODOR, Increased Moistup					
	1128 1128	H = 0.	0.Z	SAA, Recover 48, increased Moisture					
15*				COBBLES - REFUSA					
- 20 -									
25'									
30				-					

.



### **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:

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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envirotech-inc.con laboratory@envirotech-inc.con

1/27/15

Date:

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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' (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. PO Box 22024 Tulsa OK, 74121-2024	Project Project Project	t Name: t Number: t Manager:	Usse 0314 Jeff I	lman GC 1 3-0424 Blagg				<b>Reported:</b> 27-Jan-15 11	:55
		GI P5010	P-5 @ 8' 64-01 (Se	olid)					
		Reporting							
Analyte	Result	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. PO Box 22024 Tulsa OK, 74121-2024	Projec Projec Projec	et Name: et Number: et Manager:	Usse 0314 Jeff	elman GC 1 43-0424 Blagg				Reported: 27-Jan-15 11	:55
		GF P5010	P-5 @ 10 64-02 (Se	)' olid)					
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

		-GI	P-5@11	- GP	-6@11	(See Cha	ain-of-Custo	ody)	
		P5010	64-03 (Se	olid)					
		Reporting							
Analyte	Result	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**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	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	11							
Total Xylenes	ND	0.10								
Total BTEX	ND	0.10								
Surrogate: 4-Bromochlorobenzene-PID	0.473		н	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)	Sou	irce: 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)	Sou	irce: 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 4 5 4		"	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: 2	23-Jan-15 A	Analyzed: 2	4-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: 2	23-Jan-15 A	Analyzed: 2	4-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)	Sou	rce: P501062-	01	Prepared: 2	23-Jan-15 A	Analyzed: 2	4-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)	Sou	rce: P501062-	01	Prepared: 2	23-Jan-15 A	Analyzed: 2	4-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)	Sou	rce: 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)	Sou	rce: 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)	Sourc	e: 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)	Sourc	e: 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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		CH	<b>IAIN OI</b>	CUS	ГО	D	Υ	R	E	CC	DF	RC				1	77	26	5		
Client:		Pr	oject Name / Locatio	on:				ANALYSIS / PARAMETERS													
13P AMONICY			Osselmon	6C 1																	
Email results to: JEH Peac	e	Sa	impler Name:					5)	(11)	(0)						-					
JEH Blagy Nel	son vela	2	J. BLAG	6				801	d 80	826	S	_		٥.	T						
Client Phone No.: 505 - 320 - 1(9)	3	Cli	ent No.: 03143	°.: 03143-0424				Method	(Metho	Method	8 Meta	/ Anior		with H/I	ble 910	418.1)	RIDE			e Cool	e Intact
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Pr HNO <sub>3</sub>	HCI	ive	TPH (I	BTEX	VOC (	RCRA	Cation	RCI	TCLP	CO Ta	TPH (	CHLO			Sampl	Samp
GP-508'	1/22/15	1030	P501064-01	L× 402				×	×								×			Y	Y
GP-5010'	11	1038	-02	11	7			×	×								×				
6P-6011	i (	1053	-03	IX.				×	×								+			1	-
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Sample Matrix																					
Soil X Solid Sludge	Aqueous [	] Other	]																		
Sample(s) dropped off after	hours to se	cure drop o	off area.	env	ire		ee	ch	)	*	3.	ζ,	4.	.6	U	F.5	-	ah 's			
3/45 US Highway 6	• raiming	on, NM 8/4	· 505-632-0615 · 1	niee springs • 65 M	vierca	LO STR	eer, S	uite I	15, D	urang	90, C	081	301 .	apo	rator	yeen	VITOTE	cn-inc	Pag	e 11	of 11



### **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

Date: 1/29/15

Entire Report Reviewed By:

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.
<del>- GP-9 @19'</del> GP-9 @ 9'	P501065-06A	Soil	01/21/15	01/22/15	Glass Jar, 4 oz.
(See Chain-of-Custody)					

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BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024	Projec Projec Projec	Usse 0314 Jeff I	lman GC 1 3-0424 Blagg	-	<b>Reported:</b> 29-Jan-15 14:42				
		GI P5010	P-2 @10 65-01 (Se	' olid)					
		Departing		,					
Analyte	Result	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:	0314	3-0424				Reported:	
Tulsa OK, 74121-2024	Project	Manager:	Jeff I	Blagg				29-Jan-15 14	:42
		GI	P-3 @10	,					
		P5010	65-02 (Se	olid)					
		Reporting							
Analyte	Result	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. PO Box 22024 Tulsa OK, 74121-2024	Projec Projec Projec	Usse 0314 Jeff 1	elman GC 1 93-0424 Blagg		<b>Reported:</b> 29-Jan-15 14:42				
		GI 25010	P-4 @10	r (bid)					
		1 5010	05-05 (50	und)					
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. PO Box 22024 Tulsa OK, 74121-2024	Projec Projec Projec	t Name: t Number: t Manager:	Usse 0314 Jeff 1	lman GC 1 3-0424 Blagg				Reported: 29-Jan-15 14	:42	
		GI P5010	P-7 @10 65-04 (Se	, blid)						
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. PO Box 22024 Tulsa OK, 74121-2024	Project Name: Project Number: Project Manager:		Usse 0314 Jeff I	lman GC 1 3-0424 Blagg				<b>Reported:</b> 29-Jan-15 14	:42
		GI P5010	P-8 @10 65-05 (Se	' olid)					
		Reporting							
Analyte	Result	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

		-GI	P-9 @19	GP-9	9 @ 9' (8	See Chain-	of-Custody	()	
		P5010	65-06 (Se	olid)					
		Reporting							
Analyte	Result	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-F1D		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**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	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		н	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)	Sou	arce: 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)	Sou	irce: 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	н	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)	Sou	rce: 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)	Sou	rce: 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-F1D	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)	Sou	rce: 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										
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	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)	Sour	ce: P501068-	01	Prepared &	Analyzed:	27-Jan-15				
Chloride	917	9.82	mg/kg	491	394	106	80-120			
Matrix Spike Dup (1505013-MSD1)	Sour	ce: 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

Surrogate recovery was above acceptable limits.
Analyte DETECTED
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

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17714

Client:			Project Name / Loc	ation:									A	NALY	SIS	/ Paf	RAME	TER	s			
BP AMenica			USSELN	AN	GC 1							_										
Email results to: Jeff Tes	ace		Sampler Name:						15)	021)	(09											
Jeff Blagg Ne	lson Vele	22	2 - BLA	66					80	9 P	82	als	-		A	-						+
Client Phone No.:			Client No.: 021L	2-11	474				poq	etho	thoc	Meta	nior		H H	910	(F.	ш			00	Itac
505-320-1193			100	- 0	107				Met	Ň)	(Me	8	A/L		with	able	418	BIE			le O	le Ir
Sample No./ Identification	Sample Date	Samp Time	Lab No.	N of	o./Volume Containers	Pr HNO <sub>3</sub>	eservati HCI	ve	TPH (	BTEX	VOC	RCRA	Catior	RCI	TCLP	CO Ta	TPH (	CHLO			Samp	Samp
GP-2 @ 10'	1/22/2015	090	8 P501065-	1	× 402				×	×								×			Y	Y
GP-3 @ 10'	ц	094	14 -1	12	ĸ	1			×	×								×				
GP-4010'	U	101	4 -0	3	и				×	×								×				
GP-7@10'	10	1118	3 -0	4	11	i			×	×								×				
6P-8 C 10'	11	120	4 -0	5	51				×	×								×				
6P-909'	11	124	4 -0	6	16				×	×								×			1	-1
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Jeff Blegy				22/1	51616							-	/		18	1				1/24	5 11	616
Relinduished by: (Signature)						Rece	ived b	y: (S	ignat	ure) 4						1						
Sample Matrix																					+	
Soil 🕱 Solid 🗆 Sludge 🗆	Aqueous [	] Othe	r 🗆	-																		
Sample(s) dropped off after	hours to see	cure dro	p off area.	3	env	ir (		e		Y				1	4.	7,	4	- 3	17	.3		
5795 US Highway 6	4 • Farmingt	on, NM 8	37401 • 505-632-0615	• Three	Springs • 65 M	Merca	do Str	eet, S	uite 1	15, D	uran	go, C	0 81	301 •	labo	rator	y@en	virote	ch-ind	Pac	ie 14	of 15

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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

Date: 2/2/15

Entire Report Reviewed By:

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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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. PO Box 22024 Tulsa OK, 74121-2024	Project Project Project	Name: Number: Manager:	Usse 0314 Jeff I	lman GC 1 3-0424 Blagg				Reported: 02-Feb-15 15	:28
		GP P5010	12 @ 12 67-04 (So	2' olid)					
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.	Projec	t Name:	Usse	lman GC 1					
PO Box 22024	Projec	t Number:	0314	3-0424				Reported:	
Tulsa OK, 74121-2024	Projec	t Manager:	Jeff I	Blagg				02-Feb-15 15	:28
		GP	13 @ 12	2'					
		P5010	67-05 (Se	olid)					
		Reporting							
Analyte	Result	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. PO Box 22024 Tulsa OK, 74121-2024	Project Project Project	t Name: t Number: t Manager:	Usse 0314 Jeff I	lman GC 1 3-0424 Blagg				Reported: 02-Feb-15 15	:28
		GP P5010	14 @ 12 67-06 (So	olid)					
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 Ana	lytical	Laboratory
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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1505016 - Purge and Trap EPA 5030A										
Blank (1505016-BLK1)				Prepared: 2	27-Jan-15	Analyzed: 2	8-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		п	0.400		103	50-150			
LCS (1505016-BS1)				Prepared: 2	27-Jan-15	Analyzed: 2	8-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	11	20.0		92.9	75-125			
p,m-Xylene	37.4	0.20	11	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)	Sou	irce: P501067-	01	Prepared: 2	27-Jan-15	Analyzed: 2	8-Jan-15			
Benzene	16.8	0.10	mg/kg	20.0	ND	84.0	75-125			
Toluene	19.2	0.10	н	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)	Sou	rce: P501067-	01	Prepared: 2	27-Jan-15 /	Analyzed: 2	8-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	н	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

	E	nvirotech A	Analyti	cal Labor	atory					
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: 2	27-Jan-15 A	Analyzed: 2	8-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: 2	27-Jan-15 A	Analyzed: 2	8-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)	Sou	rce: P501067-	01	Prepared: 2	.7-Jan-15 A	Analyzed: 2	8-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)	Sou	rce: P501067-	01	Prepared: 2	.7-Jan-15 A	Analyzed: 2	8-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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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 Aulytical Laboratory         Analyte       Reporting Result       Spike Limit       Source Result       Spike Level       Source Result       %REC       %REC       RPD Limit       RPD Limit       Notes         Batch 1505016 - Purge and Trap EPA 5030A         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         Estition (G6-C10)       D       9.99       mg/kg       292       86.2       80-120       Surrogate: 4-Bromochlorobenzene-FID       0.391       "       0.400       97.9       50-150       Surrogate: 4-Bromochlorobenzene-FID       Surrogate: 4-Bromochlorobenzene-FID       0.400       136       50-150       Surrogate: 4-Bromochlorobenzene-FID										
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: 2	27-Jan-15 A	Analyzed: 2	8-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: 2	27-Jan-15 A	Analyzed: 2	8-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)	251 9.99 mg/kg 0.391 " Source: P501067-01			Prepared: 2	.7-Jan-15 A	Analyzed: 2	8-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)	Sou	rce: P501067-	01	Prepared: 2	7-Jan-15 A	Analyzed: 2	8-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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BP America Production Co. PO Box 22024	Proj Proj	ect Name: ect Number:	U: 03	sselman GC 1					Report	ed:
Tulsa OK, 74121-2024	Proj	ect Manager:		02-Feb-15 15:28						
	Cati En	on/Anion An wirotech Ai	alysis nalytio	- Quality ( cal Labor	Control atory					
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)	Sour	ce: P501068-01		Prepared &	Analyzed:	27-Jan-15				
Chloride	917	9.82	mg/kg	491	394	106	80-120			
Matrix Spike Dup (1505013-MSD1)	Sour	ce: 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	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: BP Amening		Pro	ject Name / Locatio	ect Name / Location: USSELMAN GC 1								A	NALY	/SIS	/ PAF	RAME	ETER	S			
Email results to: TEFE Reg	ce	Sa	mpler Name:		-				(1)											T	
JAA BLORG NO	how Vel	22	J- Bla	20.6				3015	802	8260					-						
Client Phone No.:		Cli	ent No.:	1				od 8	poul	por	etal	ion		H/P	910-	(				3	act
505-320-LL	93		03143	3-0424				Aeth	(Met	Meth	8 M	/ An		with	ole 9	118.	BUB				e Int
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	P HNO <sub>3</sub>	HCI	tive	TPH (N	BTEX	VOC (I	RCRA	Cation	RCI	TCLP	CO Tal	TPH (4	CHLOI			Cample	Sample
GP1008	1/23/15	0843	P501067-01	1×403				X	×								X			Y	X
GP 10@ 12-	1(	0847	-02	11				X	X								×			)	
GPIICIL	11	0940	- 03	IJ				X	X								X				
GPIZC12	lſ	1031	-04	I	i			X	X								x				
GPI3C12	11	1102	-05	11				X	×								X				
6P14012	1/	1128	-06	1(				×	×								X			-	
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Relinguished by: (Signature)	1				Rece	eived	by: (S	Signat	ure)			/	-1						J L P	17	1-1-1
Sample Matrix																				-	
Soil Solid Sludge	Aqueous	Other	]																		
Sample(s) dropped off after	hours to se	cure drop o	ff area.	env	ir	ot al La	e		<b>)</b> y				6.0	1,	6.	9	16	.	-		
5795 US Highway 6	4 • Farmingt	on, NM 874	01 • 505-632-0615 • 1	Three Springs • 65	Merco	do St	reet, S	Suite	115, C	Ourang	10, C	0 81	301 •	labo	prator	y@en	virote	ch-inc sa	Pa	ge 1	4 of 14

EPFS GROUNDWATER PITS 1997 ANNUAL GROUNDWATER REPORT	Senny & Bat
USSELMAN GAS COM #1 Meter/Line ID - 70753	Will 2211008
SITE DETAILS         Legals - Twn: 31N       Rng: 10W       Sec: 4       Unit: B         NMOCD Hazard Ranking: 40       Land Type         Operator: AMOCO PRODUCTION COMPANY	t i se an and the description of the second se

### PREVIOUS ACTIVITIES

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

Soil Boring: 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.
