District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Frencis Dr., Sonta Fo. NM 875

## 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.

1220 S. St. Fran	icis Dr., Sant	la Fe, NM 8750	5	Sa	ınta F	e, NM 875	05					
· · · · · ·			Rel	ease Notific	catio	n and Co	rrective A	ction	1			-2 <del>.</del>
						<b>OPERA</b>	ГOR		☐ Initia	al Report	$\boxtimes$	Final Report
Name of Co	mpany: B	P				Contact: Jef						
		Court, Farm	ington, N	M 87401			No.: 505 <b>-</b> 326-94	179	_	****		
Facility Na	ne: Barret	t A 1E					e: Natural gas v		,			
Surface Ow	ner: Feder	al		Mineral C	)wner:	Federal			API No	. 30045259	943	
				. <u>I</u>								
Unit Letter	Section	Township	Range	Feet from the		N OF REI /South Line	Feet from the	Fact/	West Line	County: Sa	n Iuon	
G	20	31N	9W	1,640	North		2,215	East	West Line	County. 3	an Juan	
		Lat	itude3	6.88633		_ Longitud	e107.80207	l				
				NAT	URE	OF RELI	EASE					
Type of Rele	ase: conder	sate and prod	uced wate				Release: 50 bbl c	of	Volume R	lecovered: n	one	
		•					and 40 bbl produ					
Source of Re tank	lease: bull p	plug and valve	on drain	line from condens	ate	Date and H unknown	our of Occurrenc	e:	Date and 1:00 PM	Hour of Dis	covery:	: 1/30/2014;
Was Immedia	ate Notice (		· Yes [	No Not Re	equired	If YES, To	Whom? Brandor	n Powel	I – NMOCI	); Shari Ket	cham -	BLM
By Whom?						-	our: 1/30/2014; 4					
Was a Water	course Read		Van 🔽	1 N.		If YES, Vo	lume Impacting t	he Wat				_
			Yes 🗵							OIL CONS	. DIV	DIST. 3
If a Watercou	ırse was lm	pacted, Descr	ibe Fully.	<b>K</b>						AUG	077	2014
split. The dra	ain valve its	self had failed	due to cor	n Taken.* The bul rrosion, so when the densate and 40 bb	he bull	plug froze and	split the contents					
the vertical ex	xtent of the	impacts. App	oroximatel	ten.*The condense y 1,250 cubic yard n the bottom and	ds of im	pacted soil w	ere removed and	transpo	rted to the la	andfarm for	treatme	ent.
regulations all public health should their cor the environ	I operators or the envi operations hament. In a	are required t ronment. The nave failed to a	o report ar acceptant adequately OCD accep	e is true and comp nd/or file certain rece of a C-141 report investigate and restance of a C-141	elease n ort by th emediat	otifications ar e NMOCD m e contaminati	nd perform correct arked as "Final Roon that pose a thre	tive act eport" of eat to g	ions for rele loes not reli round water	eases which eve the oper , surface wa	may en ator of ter, hui	danger liability man health
Signature:	off 1	Pone					OIL CON	SERV	ATION	DIVISIC	N	
Printed Name	e: Jeff Peac	e				Approved by	Environmental S	pecialis	t: (*)	Sile	حَب	11
Title: Area E	nvironment	tal Advisor				Approval Dat	e: 4/8/14		Expiration I	Date:		
E-mail Addre	ess: peace.je	effrey@bp.co	m	·		Conditions of	Approval:			Attached		

\* Attach Additional Sheets If Necessary

Phone: 505-326-9479

Date: August 6, 2014

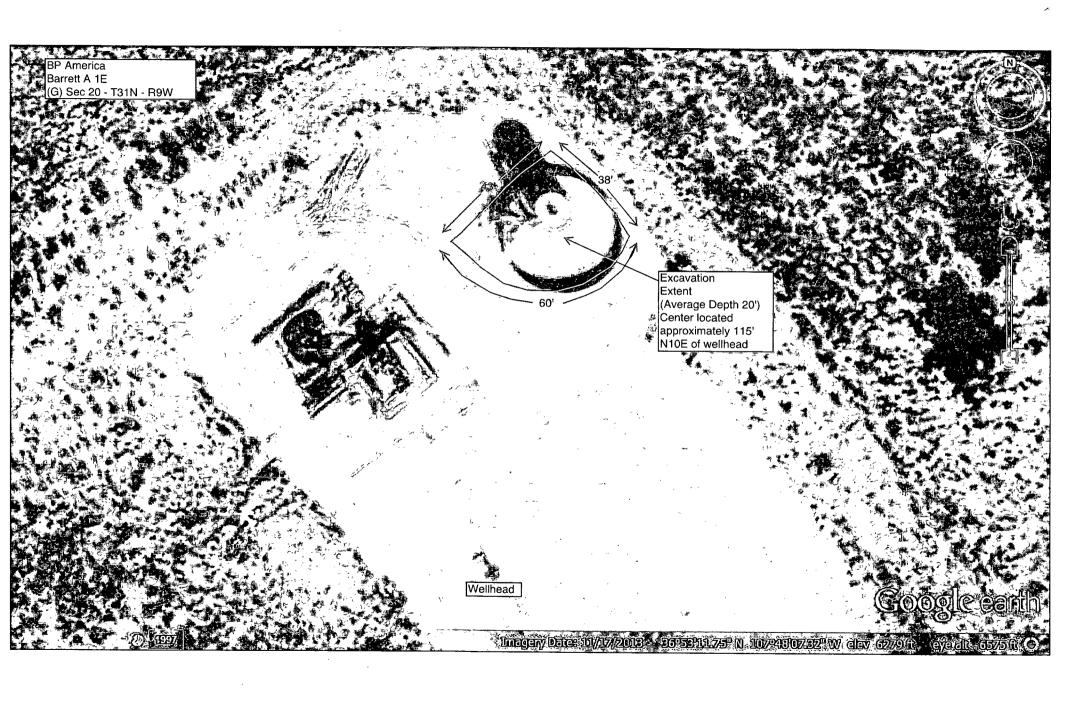
#NCS1425139269

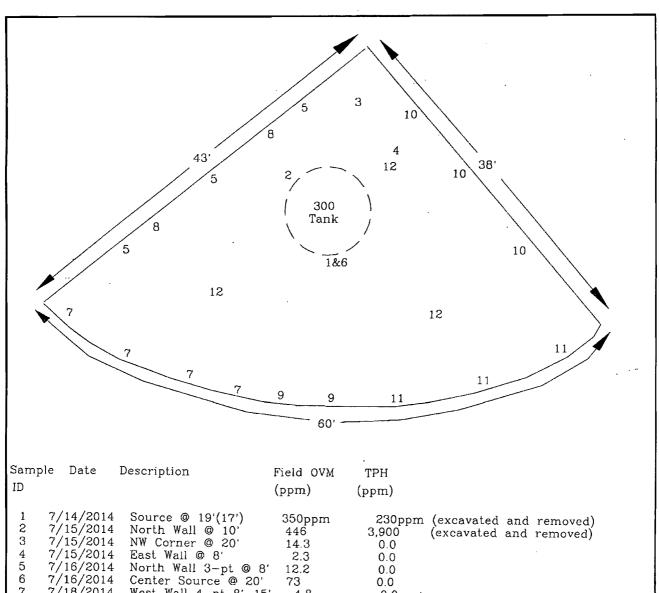


BP America Barrett A 1E (G) Sec 20 – T31N – R9W San Juan County, New Mexico

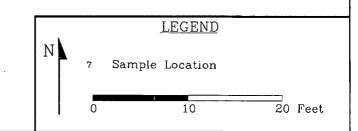
## Spill Release Remediation Summary

Jan 30, 2014	Release of approximately 50 bbl condensate & 40 bbl water discovered from failed frozen valve on stock tank.
July 14, 2014	Begin excavation of impacted soil. Conduct initial sampling for laboratory analysis.
July 15, 2015	Field and lab test results indicate vertical extent of impacts did not extend deeper than 20' below grade. Conduct additional sampling of ongoing excavation.
July 16, 2015	Conduct sampling of ongoing excavation.
July 18, 2015	Conduct sampling of ongoing excavation.
July 21, 2015	Conduct sampling of ongoing excavation.
July 22, 2015	Conduct final sampling of excavation. Complete digging.
July 23, 2015	Receive final lab results confirming closure.  Total volume soil transported to landfarm = 1,248 cubic yards





ID Date	Description	Field OVM (ppm)	TPH (ppm)	
1 7/14/2014 2 7/15/2014 3 7/15/2014 4 7/15/2014 5 7/16/2014 6 7/16/2014 7 7/18/2014 8 7/18/2014 9 7/21/2014 10 7/22/2014 12 7/22/2014	North Wall @ 10' NW Corner @ 20' East Wall @ 8' North Wall 3-pt @ 8' Center Source @ 20' West Wall 4-pt 8'-15 North Wall 2-pt 15'- SW Corner 2-pt 8'-1 South Wall 3-pt 8'-1	73 ' 4.8 18' 2.5 8' 2.4	230ppm 3,900 0.0 0.0 0.0 0.0 0.0 0.0 0.0	and removed) and removed)



	vation Sampling RRETT A 1E ** (G		BLAGG ENGINEERING, INC.
DATE: 7/2014	FIGURE B	BY: JCB	P.O. BOX 87, BLOOMFIELD, NM PHONE: (505)632-1199

#### Lab Order 1407616

Date Reported: 7/18/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: Source @ 19'

Project:

Barrett A LS 1E

Collection Date: 7/14/2014 12:15:00 PM

Lab ID:

1407616-001

Matrix: MEOH (SOIL)

Received Date: 7/15/2014 7:50:00 AM

Analyses	Result	RL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analyst	BCN
Diesel Range Organics (DRO)	190	9.9		mg/Kg	1	7/15/2014 10:16:23 AM	14218
Surr: DNOP	86.1	57.9-140		%REC	1	7/15/2014 10:16:23 AM	14218
EPA METHOD 8015D: GASOLINE RAN	IGE		,			Analyst	NSB
Gasoline Range Organics (GRO)	40	. 10		mg/Kg	2	7/15/2014 12:25:47 PM	R19893
Surr: BFB	174	80-120	S	%REC	2	7/15/2014 12:25:47 PM	R19893
EPA METHOD 8021B: VOLATILES						· Analyst	NSB
Benzene	ND	0.10		mg/Kg	2	7/15/2014 12:25:47 PM	R19893
Toluene	0.41	0.10		mg/Kg	2	7/15/2014 12:25:47 PM	R19893
Ethylbenzene	0.16	0.10		mg/Kg	2	7/15/2014 12:25:47 PM	R19893
Xylenes, Total	2.3	0.21		mg/Kg	2	7/15/2014 12:25:47 PM	R19893
Surr: 4-Bromofluorobenzene	107	80-120		%REC	2	7/15/2014 12:25:47 PM	R19893
EPA METHOD 300.0: ANIONS						Analyst:	JRR
Chloride	58·	30		mg/Kg	20	7/15/2014 11:11:23 AM	14229

Note: The sample depth on this was later determined to be approximately 17 feet below original grade and these soils were subsequently excavated and removed.

jeff blagg

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

#### Qualifiers:

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

Page 1 of 5

P Sample pH greater than 2. RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1407616

18-Jul-14

Client:

Blagg Engineering

Project:

Barrett A LS 1E

Sample ID MB-14229

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 14229

RunNo: 19915

Prep Date: 7/15/2014

SeqNo: 578776

Units: mg/Kg

HighLimit

Analysis Date: 7/15/2014 PQL

**RPDLimit** 

Analyte Chloride

ND 1.5

Result

Sample ID LCS-14229

SampType: LCS

SPK value SPK Ref Val %REC LowLimit

TestCode: EPA Method 300.0: Anions

Client ID: LCSS

Batch ID: 14229

RunNo: 19915

Prep Date: 7/15/2014

SeqNo: 578777

Units: mg/Kg

Analysis Date: 7/15/2014

1.5

15.00

**RPDLimit** Qual

Analyte Chloride

Result PQL SPK value SPK Ref Val

14

%REC 92.5 LowLimit 90

%RPD HighLimit

%RPD

Qualifiers:

Value exceeds Maximum Contaminant Level.

Value above quantitation range

Analyte detected below quantitation limits

RSD is greater than RSDlimit 0

RPD outside accepted recovery limits R

Spike Recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH greater than 2.

Reporting Detection Limit

Page 2 of 5

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1407616

18-Jul-14

Client:

Blagg Engineering

Project:

Barrett A LS 1E

Sample ID MB-14218	Samp	Type: ME	3LK	Tes	tCode: El	PA Method	8015D: Dies	el Range (	Organics	
Client ID: PBS	Batcl	h ID: <b>14</b>	218	F	RunNo: 1	9870				
Prep Date: 7/15/2014	Analysis D	)ate: 7/	15/2014	\$	SeqNo: <b>5</b>	77863	Units: mg/F	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.7		10.00		77.0	57.9	140			
Sample ID LCS-14218	Samp1	ype: LC	s	Tes	tCode: El	PA Method	8015D: Dies	el Range (	Organics	
Client ID: LCSS	Batcl	h ID: <b>14</b>	218	F	RunNo: 1	9870				•
Prep Date: 7/15/2014	Analysis E	Date: 7/	15/2014	S	SeqNo: <b>5</b>	77864	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Quai
Diesel Range Organics (DRO)	49	10	50.00	0	97.3	68.6	130			
Surr: DNOP	3.6		5.000		72.1	57.9	140			

#### Qualifiers:

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

RL Reporting Detection Limit

Page 3 of 5

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1407616

18-Jul-14

Client:

Blagg Engineering

Project:

Barrett A LS 1E

Sample ID MB-14213 MK

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

LowLimit

LowLimit

80

Client ID:

PBS

Batch ID: R19893

RunNo: 19893

Prep Date:

Analysis Date: 7/15/2014

SeqNo: 578416

Analyte

Result **PQL** 5.0

Units: mg/Kg

Gasoline Range Organics (GRO)

ND 1000

1000

SPK value SPK Ref Val

SPK value SPK Ref Val

%REC 101

HighLimit

%RPD **RPDLimit**  Qual

Surr: BFB

Sample ID LCS-14213 MK

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

120

Client ID: LCSS

Prep Date:

Batch ID: R19893

RunNo: 19893

Analysis Date: 7/15/2014

5.0

SeqNo: 578417

Units: mg/Kg

**RPDLimit** 

Analyte Gasoline Range Organics (GRO) Surr: BFB

Result **PQL** 23

1100

25.00 1000

91.7 113

%REC

71.7 80

HighLimit 134 120 %RPD

Qual

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Sample pH greater than 2.
- RLReporting Detection Limit

P

Page 4 of 5

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1407616

18-Jul-14

Client:

Blagg Engineering

Project:

Barrett A LS 1E

Sample ID MB-14213 MK	Samp	Type: MI	MBLK TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batc	h ID: <b>R1</b>	9893	F	RunNo: 1	9893				
Prep Date:	Analysis [	Date: <b>7</b> /	15/2014	SeqNo: <b>578456</b>			Units: mg/K			
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	1.2		1.000		117	80	120			
Sample ID LCS-14213 MK	Samp	Type: LC	s	TestCode: EPA Met			8021B: Volat	iles		<u></u>
Client ID: LCSS	Batc	h ID: <b>D1</b>	0803	PunNo: 10803						

Sample ID LCS-14213 MK	s	TestCode: EPA Method 8021B: Volatiles									
Client ID: LCSS	Bato	th ID: R1	9893	F	RunNo: 1	9893					
Prep Date:	Analysis	Date: 7/	15/2014	5	SeqNo: 5	78457	Units: mg/F	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.88	0.050	1.000	0	87.8	80	120				
Toluene	0.86	0.050	1.000	0	86.2	80	120				
Ethylbenzene	0.88	0.050	1.000	0	87.6	80	120				
Xylenes, Total	2.8	0.10	3.000	. 0	91.9	80	120				
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120				

### Qualifiers:

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

Page 5 of 5



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: BLAGG Received by/date:	Work Order Number	er: 14076	16		RcptN	o: <b>1</b>
Logged By: Lindsay Mang	in 7/15/2014 7:50:00 All	VI	Fine	lyHlago		
Completed By: Lindsay Mang		VI	- Street	ly Hlygo		
Reviewed By:	à 07/15/14		$\nu$	, ,		
Chain of Custody	7	•				
1. Custody seals intact on samp	le bottles?	Yes	[`] N	o ! !	Not Present ✔	•
2. Is Chain of Custody complete	?	Yes	<b>√</b> N	o i i	Not Present :	
3. How was the sample delivere	d?	Courie	<u>ər</u>			
Log In						
4. Was an attempt made to coo	I the samples?	Yes	Ø N	lo	NA .	i
5. Were all samples received at	a temperature of >0° C to 6.0°C	Yes	<b>∑</b> l N	o [ ]	NA	:
6. Sample(s) in proper containe	r(s)?	Yes	Ÿ N	lo [. ]		
7. Sufficient sample volume for	indicated test(s)?	Yes	V N	οIJ		
8. Are samples (except VOA and	d ONG) properly preserved?	Yes	V N	o i i		
9. Was preservative added to be	ottles?	Yes	(;) <b>N</b>	o 🗸	NA :	
10.VOA vials have zero headspa	ce?	Yes	EJ N	o []	No VOA Vials ✓	: :
11. Were any sample containers		Yes		lo 📝 -		
• •				:	# of preserved bottles checked	
12. Does paperwork match bottle	labels?	Yes	✓ N	o ! !	for pH:	
(Note discrepancies on chain	• •				(<) Adjusted?	2 or >12 unless noted)
13. Are matrices correctly identific	·	Yes		o . ! .	Aujusteur	
14. Is it clear what analyses were				o i :	Charled by	
15. Were all holding times able to (If no, notify customer for auth		Yes	<b>V</b> .  N	o     :	Checked by	·
<u>Special Handling (if applic</u>	eable)					
16. Was client notified of all discr	epancies with this order?	Yes	II N	o   . ]	NA ₩	
Person Notifled:	Date:			The state of the s		:
By Whom:	Via:	∏ eMai	l [ ] Phone	Fax	In Person	
Regarding:	AND THE RESIDENCE OF THE PARTY				AND THE PROPERTY OF THE PARTY O	
Client Instructions:				**************************************		
17. Additional remarks:						
18. Cooler Information						
	Condition   Seal Intact   Seal No	Seal Dat	e Signe	і Ву		
1 1.9 G	ood Yes	****				

C	hain-	of-Cu	stody Record	Turn-Arouna		ASAME DAY	1.			E.	I A I			AIX.	7 T E	<b>3</b> ~	ra e		NT.	A I	
Client:	BLAG	6 Eno	lhearth INC.	☐ Standard	<b>≱</b> (Rush	5/4/(E #1)(	-													AL RY	7
	ZP	1 110/06	- d	Project Name	<b>e</b> :									iron					* : ·	-	
Mailing	Address	Po.	theering INC.  Box 87	BARRE	TT A LS	5 1 E.		490	01 H	awki								109			
	Rima	A FIFE )	NM 87413	Project #:			1			5-34				ax	•	•					
Phone a	#: 50	5-3	20-1183	1																	
email o			·	Project Mana	ger:		)	ly)	<b>₽</b>					<b>)</b> (>)							$\prod$
QA/QC I <b>⊠</b> Stan	Package: dard		☐ Level 4 (Full Validation)	-	J. Blagi	9	<b>8</b> (8021	(Gas or	(O)			SIMS)		PO4,S(	PCB's						
Accredi		□ Othe	r	Sampler: 2	J. blace	ST No.	THME	+ TPH	30 / DF	18.1)	04.1)	8270		J <sub>3</sub> ,NO <sub>2</sub> ,	s / 8082		(A)				or N)
□ EDD	(Type)_			SamplexTem	perature:			ᇤ	<u>ত</u>	9 bo	od 5	0 or	etals	),N(	cide	(A)	i-V0	8/10/6			اچ ا
Date	Time	Matrix <sup>*</sup>	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + MIBETHMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / 如母色)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310	RCRA 8 Metals	Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Bubbles (Y or N)
14/14	1215	SOIL	Source @ 19'	4 02 X1	COOL	-001	X		×				_					X			十
							<b>-</b>														+
										f											T
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Date:	Time:	Relinquish	ed by: Blogg	Received by:	Web	Date Time 7/4/N 1610	Ren	narks	 S:	B	IU	B	LAG	<u>د</u>					I	<b></b>	<del></del>
Date:	Time:	Relinquish	ed by:  July	Redeived by:		Patie Time				ВР		Can:	tae :	<del>/</del>							

#### Lab Order 1407704

Date Reported: 7/21/2014

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: North Wall @ 10'

Project: Barrett A LS 1E

**Collection Date:** 7/15/2014 2:02:00 PM

**Lab ID:** 1407704-001

Matrix: SOIL Received Date: 7/16/2014 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS					Analyst	BCN
Diesel Range Organics (DRO)	2700	100		mg/Kg	10	7/16/2014 12:16:24 PM	14245
Surr: DNOP	0	57.9-140	S	%REC	10	7/16/2014 12:16:24 PM	14245
EPA METHOD 8015D: GASOLINE RA	ANGE					Analyst	NSB
Gasoline Range Organics (GRO)	1200	99		mg/Kg	20	7/16/2014 12:38:00 PM	R19921
Surr: BFB	359	80-120	S	%REC	20	7/16/2014 12:38:00 PM	R19921
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	0.54	0.49		mg/Kg	20	7/16/2014 12:38:00 PM	R19921
Toluene	10	0.99		mg/Kg	20	7/16/2014 12:38:00 PM	R19921
Ethylbenzene	5.9	0.99		mg/Kg	20	7/16/2014 12:38:00 PM	R19921
Xylenes, Total	60	2.0		mg/Kg	20	7/16/2014 12:38:00 PM	R19921
Surr: 4-Bromofluorobenzene	. 149	80-120	S	%REC	20	7/16/2014 12:38:00 PM	R19921
EPA METHOD 300.0: ANIONS						Analyst	JRR
Chloride	ND	30		mg/Kg	20	7/16/2014 11:38:00 AM	14251

Note: This sample tested a field OVM of 446 ppm and was submitted for laboratory testing to determine a correlation between field OVM readings and laboratory TPH/BTEX This north wall was was subsequently excavated and removed

jeff blagg

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

#### Qualifiers:

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

Page 1 of 7

- P Sample pH greater than 2.
- RL Reporting Detection Limit

#### Lab Order 1407704

Date Reported: 7/21/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Barrett A LS 1E

**Lab ID:** 1407704-002

Client Sample ID: NW Corner @ 20'

**Collection Date:** 7/15/2014 2:04:00 PM

Received Date: 7/16/2014 8:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/16/2014 12:47:31 PM	14245
Surr: DNOP	84.4	57.9-140	%REC	1	7/16/2014 12:47:31 PM	14245
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.4	mg/Kg	1	7/16/2014 10:07:12 AM	R19921
Surr: BFB	89.5	80-120	%REC	1	7/16/2014 10:07:12 AM	R19921
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.054	mg/Kg	1	7/16/2014 10:07:12 AM	R19921
Toluene	ND	0.054	mg/Kg	1	7/16/2014 10:07:12 AM	R19921
Ethylbenzene	ND	0.054	mg/Kg	1	7/16/2014 10:07:12 AM	R19921
Xylenes, Total	ND	0.11	mg/Kg	1	7/16/2014 10:07:12 AM	R19921
Surr: 4-Bromofluorobenzene	97.1	80-120	%REC	1	7/16/2014 10:07:12 AM	R19921
EPA METHOD 300.0: ANIONS					Analyst	JRR
Chloride	34	30	mg/Kg	. 20	7/16/2014 12:15:13 PM	14251

Matrix: SOIL

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

#### Qualifiers:

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

Page 2 of 7

- P Sample pH greater than 2.
- RL Reporting Detection Limit

#### Lab Order 1407704

Date Reported: 7/21/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: East Wall @ 8'

Project: Barrett A LS 1E

Collection Date: 7/15/2014 2:09:00 PM

Lab ID: 1407704-003

Received Date: 7/16/2014 8:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS	•			Analyst	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/16/2014 1:18:43 PM	14245
Surr: DNOP	84.4	57.9-140	%REC	1	7/16/2014 1:18:43 PM	14245
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	7/16/2014 10:37:25 AM	R19921
Surr: BFB	90.4	80-120	%REC	1	7/16/2014 10:37:25 AM	R19921
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.043	mg/Kg	1	7/16/2014 10:37:25 AM	R19921
Toluene	ND	0.043	mg/Kg	1	7/16/2014 10:37:25 AM	R19921
Ethylbenzene	ND	0.043	mg/Kg	1	7/16/2014 10:37:25 AM	R19921
Xylenes, Total	ND	0.086	mg/Kg	1	7/16/2014 10:37:25 AM	R19921
Surr: 4-Bromofluorobenzene	98.6	80-120	%REC	1	7/16/2014 10:37:25 AM	R19921
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Chloride	ND	30	mg/Kg	20	7/16/2014 12:27:38 PM	14251

Matrix: SOIL

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

#### Qualifiers:

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

Page 3 of 7

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1407704 21-Jul-14

Client:

Blagg Engineering

Project:

Barrett A LS 1E

Sample ID

MB-14251

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID: Prep Date:

**PBS** 

Batch ID: 14251

RunNo: 19944

7/16/2014

Analysis Date: 7/16/2014

PQL

SeqNo: 579600

Units: mg/Kg

Qual

Analyte Chloride

ND

Result

HighLimit

%RPD **RPDLimit** 

1.5

Sample ID LCS-14251

LCSS

SampType: LCS

TestCode: EPA Method 300.0: Anions RunNo: 19944

Batch ID: 14251

7/16/2014 Prep Date:

Analysis Date: 7/16/2014

SeqNo: 579601

Units: mg/Kg

Client ID:

Analyte

PQL SPK value SPK Ref Val

%REC

SPK value SPK Ref Val %REC LowLimit

LowLimit HighLimit **RPDLimit** 

%RPD

Qual

Chloride

110

14 1.5 15.00 91.3 90

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range E
- Analyte detected below quantitation limits
- RSD is greater than RSDlimit 0
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- Sample pH greater than 2. Reporting Detection Limit RL

Page 4 of 7

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1407704

21-Jul-14

Client:

Blagg Engineering

Project: Barrett	A LS 1E	•
Sample ID MB-14245	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 14245	RunNo: 19918
Prep Date: 7/16/2014	Analysis Date: 7/16/2014	SeqNo: 578836 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	9.2 10.00	91.5 57.9 140
Sample iD LCS-14245	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: LCSS	Batch ID: 14245	RunNo: 19918
Prep Date: <b>7/16/2014</b>	Analysis Date: 7/16/2014	SeqNo: 578862 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	54 10 50.00	0 108 68.6 130
Surr: DNOP	4.1 5.000	82.6 57.9 140
Sample ID MB-14274	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 14274	RunNo: 19943
Prep Date: 7/17/2014	Analysis Date: 7/17/2014	SeqNo: <b>580659</b> Units: <b>%REC</b>
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	7.7 10.00	76.8 57.9 140
Sample ID LCS-14274	SampType: <b>LCS</b>	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: LCSS	Batch ID: 14274	RunNo: 19943
Prep Date: 7/17/2014	Analysis Date: 7/17/2014	SeqNo: 580660 Units: %REC
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	3.9 5.000	77.7 57.9 140

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range Ē
- Analyte detected below quantitation limits
- RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- Sample pH greater than 2.
- Reporting Detection Limit

Page 5 of 7

## Hall Environmental Analysis Laboratory, Inc.

WO#:

**RPDLimit** 

**RPDLimít** 

1407704

21-Jul-14

Qual

Qual

Qual

Qual

Qual

Client:

Blagg Engineering

Project:

Client ID:

Surr: BFB

Barrett A LS 1E

Sample ID MB-14230 MK

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

TestCode: EPA Method 8015D: Gasoline Range

HighLimit

%RPD

%RPD

PBS Batch ID: R19921 RunNo: 19921

%REC

Prep Date: Analysis Date: 7/16/2014 SeqNo: 579280 Units: mg/Kg

Analyte Result **PQL** Gasoline Range Organics (GRO) ND 5.0

960

95.7 80 120

LowLimit

Sample ID LCS-14230 MK SampType: LCS Client ID: LCSS Batch ID: R19921

RunNo: 19921

Prep Date: Analysis Date: 7/16/2014 SeqNo: 579286 Units: mg/Kg

1000

SPK value SPK Ref Val

Result SPK value SPK Ref Val %REC Analyte LowLimit HighLimit 22 5.0 n Gasoline Range Organics (GRO) 25.00 89.1 71.7 134 Surr: BFB 1000 1000 120

Sample ID MB-14250 MK SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

80

Client ID: PBS Batch ID: R19948 Prep Date: Analysis Date: 7/17/2014

RunNo: 19948 SeqNo: 580277

Result SPK value SPK Ref Val %REC Analyte POL LowLimit HighLimit

%RPD **RPDLimit** Surr: BFB 900 1000 89.9 80 120

Sample ID LCS-14250 MK

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: R19948

RunNo: 19948

104

HighLimit

%RPD

**RPDLimit** 

Page 6 of 7

Units: %REC

Prep Date:

Analysis Date: 7/17/2014

SeaNo: 580278

Units: %REC

SPK value SPK Ref Val %REC Analyte Result **PQL** LowLimit HighLimit %RPD **RPDLimit** Surr: BFB 1000 95.1 120

Sample ID MB-14250 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: **PBS** Batch ID: 14250 RunNo: 19948 7/16/2014 Analysis Date: 7/17/2014 SeqNo: 580281 Units: %REC Prep Date:

%REC Analyte Result **PQL** SPK value SPK Ref Val LowLimit HighLimit %RPD **RPDLimit** Qual Surr: BFB

Sample ID LCS-14250 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

SPK value SPK Ref Val

Batch ID: 14250 LCSS RunNo: 19948 Client ID:

**PQL** 

Result

7/16/2014 Analysis Date: 7/17/2014 SeqNo: 580282 Units: %REC Prep Date:

Surr: BFB 950 1000 95.1 80 120

#### **Oualifiers:**

Analyte

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range Е
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В

LowLimit

- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND

%REC

- - Sample pH greater than 2.
- Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1407704

21-Jul-14

Client: Project:

Blagg Engineering

Barrett A LS 1E

						<del>}</del>	
Sample ID MB-14230 MK	SampTyp	e: MBLK	TestCode: E	PA Method	8021B: Volatiles		
Client ID: PBS	Batch II	D: <b>R19921</b>	RunNo: *	19921			
Prep Date:	Analysis Date	e: <b>7/16/2014</b>	SeqNo: 8	579349	Units: mg/Kg		
Analyte	Result I	PQL SPK value	SPK Ref Val %REC	LowLimit	HighLimit %R	PD RPDLimit	Qual
Benzene	ND (	0.050			<u> </u>		
Toluene	ND (	0.050					
Ethylbenzene	ND (	0.050					
Xylenes, Total	ND	0.10					
Surr: 4-Bromofluorobenzene	1.1	1.000	109	80	120		
Sample ID MB-14250 MK	SampTyp	e: MBLK	TestCode: E	PA Method	8021B: Volatiles	<del></del>	
Client ID: PBS	Batch I	D: <b>R19948</b>	RunNo: 1	19948			
Prep Date:	Analysis Date	e: <b>7/17/2014</b>	SeqNo: §	80348	Units: %REC		
Anaiyte	Result I	PQL SPK value	SPK Ref Val %REC	LowLimit	HighLimit , %R	PD RPDLimit	Qual
Surr: 4-Bromofluorobenzene	, 1.0	1.000	100	80	120		
Sample ID LCS-14250 MK	SampTyp	e: LCS	TestCode: E	PA Method	8021B: Volatiles		
Client ID: LCSS	Batch ID	D: <b>R19948</b>	RunNo: 1	9948			
Prep Date:	Analysis Date	e: <b>7/17/2014</b>	SeqNo: 5	80349	Units: %REC		
Analyte '	Result F	PQL SPK value	SPK Ref Val %REC	LowLimit	HighLimit %R	PD RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0	1.000	103	80	120		
Sample ID LCS-14230 MK	SampTyp	e: LCS	TestCode: E	PA Method	8021B: Volatiles		
Client ID: LCSS	Batch ID	): <b>R19921</b>	RunNo: 1	9948			
Prep Date:	Analysis Date	e: <b>7/17/2014</b>	SeqNo: 5	80359	Units: mg/Kg		

#### Qualifiers:

Analyte

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

Benzene Toluene

Value exceeds Maximum Contaminant Level.

Result

1.0

1.0

0.99

3.0

1.1

PQL

0.050

0.050

0.050

0.10

SPK value SPK Ref Val

1.000

1.000

1.000

3.000

1.000

- 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

%REC

103

99.8

99.2

101

107

0

0

0

0

LowLimit

80

80

80

80

80

HighLimit

120

120

120

120

120

%RPD

**RPDLimit** 

Qual

P Sample pH greater than 2.

Page 7 of 7

RL Reporting Detection Limit



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuaueraue, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

## Sample Log-In Check List

**BLAGG** Client Name: Work Order Number: 1407704 RcptNo: 1 Received by/date: an Ilm **Anne Thorne** 7/16/2014 8:10:00 AM Logged By: Completed By: 7/16/2014 Anne Thorne Reviewed By: Chain of Custody No 🖸 1 Custody seals intact on sample bottles? Not Present No 🗌 Yes 🗸 Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In NA 🗍 Yes 🗸 No 🗌 4. Was an attempt made to cool the samples? No  $\square$ NA 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C Yes 🗸 Yes 🗸 No 🗌 6. Sample(s) in proper container(s)? Yes 🗸 No 🗍 7. Sufficient sample volume for indicated test(s)? **V** 8. Are samples (except VOA and ONG) properly preserved? Yes Yes 🗌 No 🗹 NA 🗌 9. Was preservative added to bottles? No 🗌 No VOA Vials 10. VOA vials have zero headspace? No 🗹 Yes 11. Were any sample containers received broken? # of preserved bottles checked Yes 🗸 No 🗌 for pH: 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) (<2 or >12 unless noted) Adjusted? No 🗌 13. Are matrices correctly identified on Chain of Custody? No 🗌 14. Is it clear what analyses were requested? Yes 🔽 Yes 🗹 No 🗆 Checked by: 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes 🗌 No 🗌 NA 🔽 16. Was client notified of all discrepancies with this order? Person Notified: Date By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C Condition Seal Intact | Seal No Seal Date Signed By 1.4 Good

	hain-	of-Cu	istody Record	Turn-Around		ASAP SAME DAY				_		= =	<b>5</b> !	<b>NB 3.</b>	7 T E	•		ME	NT	ΛI	
Client:	BLAG	& ENC	sweeth Inc.	☐ Standard	Rush	SAME DAP													VTO		7
			icq	Project Name				<b>P</b> <sub>0</sub> ,	*5			v.hal									
Mailing	Address	P.O.	Box 87	BARRETT	- A LS	1E		49	01 H	awki								<b>'</b> 109			
<del></del> ,,			D NM 87413	Project #:						)5-34					=		-410				
Phone:			20-1183				4						naly	/sis	Req	ues	L <sub>3</sub> ,				,
email or				Project Mana	ger:		=	nly)	8					(†0	,						
QA/QC F	-	_	□ Level 4 (Full Validation)	J.	BLAGE	•	<b>TMB</b> (8021)	(Gas o	<b>料</b> 02			SIMS)		,PO4,S	PCB's						ļ
Accredi		□ Othe	er	Sampler: On Ice	XYes			+ TPH	RO / DI	.18.1)	(04.1)		•	O <sub>3</sub> ,NO <sub>2</sub>	s / 8082		(A)				or N)
□ EDD	(Type)			Sample Temp	perature:	A RESIDENCE		BE	3 (G	od 4	od 5	10 OI	etals	Ň.	cide	Æ	١٠٧٠	اييا			\ <u>\</u>
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX - ALB	BTEX + MTBE + TPH (Gas only)	ТРН 8015В (GRO / DRO / <u>МВ</u> ®)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides /	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Bubbles (Y or N)
1/15/14	1402	SOIL	North Wall @ 10'	402 × 1	Cesi	-cu	X		X									X			
1(	1404	ij	NW Corner @ 20'	uf	ų	7062	1		×									X			T
10.	1409	1(	EAST Walle 8	ų (	٠١	-203			×									×			T
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	<u> </u>	<u> </u>					-														+
Date:	Time:	Relinguish	ned by:	Received by:	<u> </u>	Date Time	Rer	nark	<u></u>								<u> </u>	Ш			
Date:	1540	Jef	1 Blogg	Amste	Marte	45/14 1540		Hank	<b>J</b> .	81	li	Br	A60	L						. •	
Date:	Time:	Relfinguist	Tue Walter	Received by	de 1	Date Time / 07/14/4 07	10	ı	Ĩ	3 <i>P</i>	6	nte	t-	Je	H	R	) ومار	e			
	f necessary	samples sub	omitted to Hall Environmental may be sub-	contracted to other ac	ccredited laboratori	es. This serves as notice of this	s possi	bility.											al report.		

Lab Order 1407774

Date Reported: 7/22/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: N Wall 3-pt @ 8'

Project: BARRETT A 1E

**Collection Date:** 7/16/2014 1:01:00 PM

Lab ID: 1407774-001

Received Date: 7/17/2014 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	SE ORGANICS	,			Analys	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/17/2014 12:00:39 PM	14274
Surr: DNOP	85.9	57.9-140	%REC	1	7/17/2014 12:00:39 PM	14274
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	4.5	mg/Kg	1	7/17/2014 12:10:21 PM	R19948
Surr: BFB	87.4	80-120	%REC	1	7/17/2014 12:10:21 PM	R19948
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.045	mg/Kg	1	7/17/2014 12:10:21 PM	R19948
Toluene	ND	0.045	mg/Kg	1	7/17/2014 12:10:21 PM	R19948
Ethylbenzene	ND	0.045	mg/Kg	1	7/17/2014 12:10:21 PM	R19948
Xylenes, Total	ND	0.089	mg/Kg	1	7/17/2014 12:10:21 PM	R19948
Surr: 4-Bromofluorobenzene	95.0	80-120	%REC	1	7/17/2014 12:10:21 PM	R19948
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Chloride	ND	30	mg/Kg	20	7/17/2014 12:15:20 PM	14278

Matrix: SOIL

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

#### Qualifiers:

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

Page 1 of 6

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1407774

Date Reported: 7/22/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: Center Source @ 20'

Collection Date: 7/16/2014 1:16:00 PM

BARRETT A 1E Project: Lab ID: 1407774-002

Received Date: 7/17/2014 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/17/2014 12:22:03 PM	14274
Surr: DNOP	80.8	57.9-140	%REC	1	7/17/2014 12:22:03 PM	14274
EPA METHOD 8015D: GASOLINE RA	ANGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/17/2014 12:38:57 PM	R19948
Surr: BFB	106	80-120	%REC	1	7/17/2014 12:38:57 PM	R19948
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.050	mg/Kg	1	7/17/2014 12:38:57 PM	R19948
Toluene	ND	0.050	mg/Kg	1	7/17/2014 12:38:57 PM	R19948
Ethylbenzene	ND	0.050	mg/Kg	1	7/17/2014 12:38:57 PM	R19948
Xylenes, Total	ND	0.10	mg/Kg	1	7/17/2014 12:38:57 PM	R19948
Surr: 4-Bromofluorobenzene	107	80-120	%REC	1	7/17/2014 12:38:57 PM	R19948
EPA METHOD 300.0: ANIONS					Analyst	JRR
Chloride	49	30	mg/Kg	20	7/17/2014 12:27:45 PM	14278

Matrix: SOIL

Note: This sample collected at same location as 7/14/2014 sample (which was labelled at 19 foot depth, but subsequently determined to be from a depth of 17')

jeff blagg

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

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- RSD is greater than RSDlimit 0
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND

Page 2 of 6

- Sample pH greater than 2.
- Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1407774 22-Jul-14

Client:

Blagg Engineering

Project:

BARRETT A 1E

Sample ID MB-14278

SampType: MBLK

TestCode: EPA Method 300.0: Anions

LowLimit

Client ID:

PBS

Batch ID: 14278

RunNo: 19973

Prep Date: 7/17/2014 Analysis Date: 7/17/2014

SeqNo: 580401

%REC

Units: mg/Kg HighLimit

**RPDLimit** 

Qual

Analyte Chloride

Result **PQL** 

ND 1.5

TestCode: EPA Method 300.0: Anions

%RPD

SampType: LCS

Sample ID LCS-14278

LCSS Client ID:

Batch ID: 14278

RunNo: 19973

Prep Date: 7/17/2014

Analysis Date: 7/17/2014

SeqNo: 580402

Units: mg/Kg

SPK value SPK Ref Val

HighLimit

**PQL** 

15.00

Page 3 of 6

1.5

Chloride

14

90

110

%RPD

Qual

Result

92.7

Analyte

SPK value SPK Ref Val

%REC

LowLimit

**RPDLimit** 

Qualifiers:

Е

Value exceeds Maximum Contaminant Level.

Analyte detected below quantitation limits 0

RPD outside accepted recovery limits R

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

Sample pH greater than 2.

Not Detected at the Reporting Limit ND

Reporting Detection Limit

Н

Value above quantitation range

RSD is greater than RSDlimit

Spike Recovery outside accepted recovery limits

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1407774

22-Jul-14

Client:

Blagg Engineering

Project:

BARRETT A 1E

Sample ID MB-14274

SampType: MBLK

TestCode: EPA Method 8015D: Diesel Range Organics

Client ID:

**PBS** 

Batch ID: 14274

**PQL** 

RunNo: 19943

%RPD

Prep Date: 7/17/2014 Analysis Date: 7/17/2014

Result

7.7

Units: mg/Kg

Analyte

SeqNo: 580659 %REC

HighLimit

**RPDLimit** Qual

Diesel Range Organics (DRO) Surr: DNOP

ND 10

10.00

SPK value SPK Ref Val

76.8

LowLimit

57.9

Sample ID LCS-14274

SampType: LCS

TestCode: EPA Method 8015D: Diesel Range Organics

%RPD

Client ID: LCSS Batch ID: 14274

RunNo: 19943

Prep Date: 7/17/2014 Analysis Date: 7/17/2014

SeqNo: 580660

Units: mg/Kg

140

Analyte

Result PQL SPK value SPK Ref Val

%REC

LowLimit HighLimit

Qual

Diesel Range Organics (DRO) Surr: DNOP

47 10 50.00 3.9 5.000

68.6 57.9

140

130

**RPDLimit** 

0 93.1 77.7

#### Qualifiers:

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

Page 4 of 6

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1407774

22-Jul-14

Client:

Blagg Engineering

Project:

**BARRETT A 1E** 

Sample ID MB-14250 MK

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: R19948

**PQL** 

RunNo: 19948

SegNo: 580277

Units: mg/Kg

120

Prep Date: Analyte

Analysis Date: 7/17/2014

Result

**RPDLimit** Qual

Gasoline Range Organics (GRO)

5.0

SPK value SPK Ref Val %REC

HighLimit

%RPD

ND 900

1000

89 9

80

80

LowLimit

Surr: BFB

Sample ID LCS-14250 MK

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Prep Date:

Batch ID: R19948

RunNo: 19948 SeqNo: 580278

%REC

Units: mg/Kg

LowLimit HighLimit

Qual

Gasoline Range Organics (GRO)

Result PQL 23 5.0

SPK value SPK Ref Val 25.00

1000

1000

92.6 95.1

71.7

134

%RPD **RPDLimit** 

Surr: BFB

Analyte

Sample ID MB-14250

7/16/2014

950

900

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

PBS Client ID:

Batch ID: 14250

Analysis Date: 7/17/2014

RunNo: 19948

Units: %REC

120

120

Analyte

Result

Analysis Date: 7/17/2014

SPK value SPK Ref Val %REC

SeqNo: 580281 LowLimit

HighLimit

**RPDLimit** Qual

Surr: BFB

Prep Date:

Sample ID LCS-14250

LCSS

7/16/2014

SampType: LCS Batch ID: 14250 TestCode: EPA Method 8015D: Gasoline Range

89.9

RunNo: 19948

SeqNo: 580282

80

Units: %REC

%RPD

Qual

Analyte Surr: BFB

Client ID:

Prep Date:

Analysis Date: 7/17/2014

SPK value SPK Ref Val

%REC

LowLimit

HighLimit 120 %RPD

**RPDLimit** 

950

Result

1000

95.1

J

- **Oualifiers:** Value exceeds Maximum Contaminant Level.
  - E Value above quantitation range
- Analyte detected below quantitation limits RSD is greater than RSDlimit O
- RPD outside accepted recovery limits R Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- Р Sample pH greater than 2.

ND

Reporting Detection Limit

Not Detected at the Reporting Limit Page 5 of 6

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1407774

22-Jul-14

Client:

Blagg Engineering

Project:

BARRETT A 1E

Sample ID MB-14250 MK	Samp	Туре: <b>М</b> Е	BLK	Tes	tCode: E	PA Method	8021B: Volạ	tiles		
Client ID: PBS	Bato	h ID: <b>R1</b>	9948	F	RunNo: 1	9948				
Prep Date:	Analysis [	Date: <b>7</b> /	17/2014	5	SeqNo: 5	80348	Units: mg/h	(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		100	80	120			
Sample ID LCS-14250 MK	Samp <sup>-</sup>	Гуре: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: <b>R1</b>	9948	F	RunNo: 1	9948				
Pren Date:	Analysis [	Date: 7/	17/2014	5	SeaNo: 5	80349	Units: ma/k	(a		

Sample ID LCS-14250 MK	Samp <sup>-</sup>	Type: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Bato	h ID: <b>R1</b>	9948	F	RunNo: 1	9948				
Prep Date:	Analysis [	Date: <b>7</b> /	17/2014	8	SeqNo: <b>5</b>	80349	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.050	1.000	0	98.8	80	120			
Toluene	0.95	0.050	1.000	0	94.9	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.5	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.1	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

#### Qualifiers:

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

RL Reporting Detection Limit

Page 6 of 6



tiali Environmental Analysis Lavoralory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: **BLAGG** Work Order Number: 1407774 RcptNo: 1 AT 17/14 Received by/date: aone Il-Logged By: **Anne Thorne** 7/17/2014 7:40:00 AM Anne Thorne Completed By: 7/17/2014 Reviewed By: Chain of Custody 1. Custody seals intact on/sample bottles? Yes No 🗀 Not Present ✓ Yes 🗹 2. Is Chain of Custody complete? No 🗌 Not Present 3. How was the sample delivered? Courier Log In 4. Was an attempt made to cool the samples? No 🗌 NA 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C NA 🗔 6. Sample(s) in proper container(s)? Yes 🗸 7. Sufficient sample volume for indicated test(s)? Yes No 🔲 8. Are samples (except VOA and ONG) properly preserved? No 🗹 NA 🗌 9. Was preservative added to bottles? Yes 🗌 Yes 🗌 No 🗌 No VOA Vials 10. VOA vials have zero headspace? Yes No 🗹 11. Were any sample containers received broken? # of preserved bottles checked No: for pH: 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) No 🗆 Adjusted? 13. Are matrices correctly identified on Chain of Custody? ~ No 🗌 14. Is it clear what analyses were requested? No 🗌 Yes 🔽 Checked by: 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) 16 Was client notified of all discrepancies with this order? Yes No  $\square$ NA 🗸 Person Notified: Date: By Whom: In Person Via: eMail Phone Fax Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Temp C Condition Seal Intact | Seal No | Seal Date | Signed By Cooler No. 1.0 Good Yes

C	hain-	of-Cu	istody Record	i urn-Around	rime:	ASAP	Ι.							AB RA	TE	2	ri e	MER	ITA		
Client:	BLAG	S ENC	Sweerly Inc.	☐ Standard	Rush	SAME Day	_												TOR		
	13P	America	ra	Project Name	<b>)</b> ;				1							tal.co					
Mailing	Address	Po.	Box 87	BARR	RETT A	1E		49	01 H	awki								'109			
	Bian	mfie	id NM 87413	Project #:						5-34				-	-	345-					
Phone			320 - 1183				4					Α	naly	sis	Req	uést				- · · · · · · · · · · · · · · · · · · ·	7
email o	r Fax#:			Project Mana	ger:			only)	CHART					04)	,						
QA/QC I	Package:			<b>ア</b>	BLAGO		(8021)	38.0	艮			3	1	, S	PCB's			į	1 1		ı
Stan			☐ Level 4 (Full Validation)				3) s	(0,0	DRO			SIMS)		PO,	2 P(						
Accredi  □ NEL		□ Othe	er	Sampler:	I-B/=99	7 EDINO PER SERVICE		TPH (Gas	1	8.1)	4.1	3270		3,NO <sub>2</sub>	/ 8082		7				Z
□ EDD	(Type)				perature:			동 +	(GRO	d 41	d 50	ю	tals	N,	des		0	3			ر ح
Date	Time	Matrix	Sample Request ID	1507/17/14	Preservative Type		BTEX + MIBE	BTEX + MTBE	TPH 8015B	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	CHLORUDI			Air Bubbles
16/14	1301	SOIL	N-Wall 3-ptc8'	402 ×1	Cox	7001	X		X									X			!
11	1316	1.0	N-Wall 3-pt @8' Center Source @ 20'	<b>v</b> ( '	11	-002	٧ /		X									X			_
																					_
		-																			 
			-																		
																					Ĺ
																					L
Date:    Date:   Date:	Time:	Relinquish Relinquish	11 Blogg /	Received by:	Og	Date Time	Rei	nark	s:	Bi	u	B	CAE	6	. —			ace	-		
1/16/14	1749	L/M	ristu Waller	10	an	101/11/0				BA	2 (	(ev	He	et.	.' c	<b>7.</b>	Pe	ace		_	
, ,	f necessary,	samples sub	omitted to Hall Environmental may be subc	contracted to other a	ccredited laboratori	es. This serves as notice of t	his poss	ibility.	Any su	ib-cont	racted	data v	will be	clear	ly nota	ated on	the a	nalytical r	eport.		

#### Lab Order 1407981

Date Reported: 7/25/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: West Wall 4-pt 8'-15'

Project: Barrett A 1E

**Collection Date:** 7/18/2014 1:55:00 PM

Lab ID: 1407981-001

Received Date: 7/22/2014 8:00:00 AM

Analyses	Result	RL Qı	ıal Units	· DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS	·			Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/22/2014 11:06:17 AI	vi 14345
Surr: DNOP	77.0	57.9-140	%REC	1	7/22/2014 11:06:17 Al	M 14345
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.5	mg/Kg	1	7/22/2014 9:24:53 AM	R20059
Surr: BFB	84.5	80-120	%REC	1	7/22/2014 9:24:53 AM	R20059
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.045	mg/Kg	1	7/22/2014 9:24:53 AM	R20059
Toluene	ND	0.045	mg/Kg	1	7/22/2014 9:24:53 AM	R20059
Ethylbenzene	ND	0.045	mg/Kg	1	7/22/2014 9:24:53 AM	R20059
Xylenes, Total	ND	0.090	mg/Kg	1	7/22/2014 9:24:53 AM	R20059
Surr: 4-Bromofluorobenzene	98.8	80-120	%REC	1	7/22/2014 9:24:53 AM	R20059
EPA METHOD 300.0: ANIONS	•				Analys	t: JRR
Chloride	69	30	mg/Kg	20	7/22/2014 11:48:36 AM	A 14352

Matrix: SOIL

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

#### Qualifiers:

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

Page 1 of 6

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1407981

Date Reported: 7/25/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: North Wall 2-pt 15'-18'

Project: Barrett A 1E

**Collection Date:** 7/18/2014 2:05:00 PM

Lab ID: 1407981-002

**Received Date:** 7/22/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS		· <u></u>		Analyst	: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/22/2014 11:27:50 AM	14345
Surr: DNOP	75.4	57.9-140	%REC	1	7/22/2014 11:27:50 AM	14345
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/22/2014 9:55:02 AM	R20059
Surr: BFB	85.1	80-120	%REC	1	7/22/2014 9:55:02 AM	R20059
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.050	mg/Kg	1	7/22/2014 9:55:02 AM	R20059
Toluene	ND	0.050	mg/Kg	1	7/22/2014 9:55:02 AM	R20059
Ethylbenzene	ND	0.050	mg/Kg	1	7/22/2014 9:55:02 AM	R20059
Xylenes, Total	ND	0.10	mg/Kg	1	7/22/2014 9:55:02 AM	R20059
Surr: 4-Bromofluorobenzene	101	80-120	%REC	1	7/22/2014 9:55:02 AM	R20059
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Chloride	170	30	mg/Kg	20	7/22/2014 12:25:51 PM	14352

Matrix: SOIL

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

#### Qualifiers:

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

Page 2 of 6

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1407981

25-Jul-14

Client:

Blagg Engineering

Project:

Barrett A 1E

Sample ID MB-14352

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 14352

RunNo: 20077

Units: mg/Kg

Prep Date:

7/22/2014

Analysis Date: 7/22/2014 PQL

SeqNo: 583605

HighLimit

%RPD **RPDLimit** 

Qual

Analyte Chloride

Result

Sample ID LCS-14352

SampType: LCS

TestCode: EPA Method 300.0: Anions

%RPD

Client ID: **LCSS** 

RunNo: 20077

Prep Date: 7/22/2014

Batch ID: 14352 Analysis Date: 7/22/2014

SeqNo: 583606

Units: mg/Kg

Analyte

Result

SPK value SPK Ref Val 15.00

LowLimit

Chloride

14

110

PQL 1.5

SPK value SPK Ref Val %REC LowLimit

%REC 93.1

90

HighLimit

**RPDLimit** 

Qual

Qualifiers:

Е

Value exceeds Maximum Contaminant Level.

Analyte detected below quantitation limits J RSD is greater than RSDlimit

RPD outside accepted recovery limits R

Value above quantitation range

Spike Recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Sample pH greater than 2.

Reporting Detection Limit

Page 3 of 6

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1407981

25-Jul-14

Client: Blagg Er	ngineering								
Project: Barrett A	1E							_	
Sample ID MB-14345	SampType: <b>M</b>	BLK	Tes	tCode: E	PA Method	8015D: Dies	el Range (	Organics	
Client ID: PBS	Batch ID: 14	1345	. F	RunNo: 2	0046				
Prep Date: 7/22/2014	Analysis Date: 7	/22/2014	8	SeqNo: 5	82880	Units: mg/k	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10								
Surr: DNOP	6.5 	10.00		64.7	57.9	140			
Sample ID LCS-14345	SampType: L0	cs	Tes	tCode: E	PA Method	8015D: Dies	el Range (	Organics	
Client ID: LCSS	Batch ID: 14	345	F	RunNo: 2	0046				
Prep Date: 7/22/2014	Analysis Date: 7	/22/2014	S	SeqNo: <b>5</b>	82881	Units: mg/K	ζg		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47 10		0	94.1	68.6	130			
Surr: DNOP	3.4	5.000		68.1	57.9	140			
Sample ID MB-14374	SampType: M	BLK	Tes	tCode: E	PA Method	8015D: Diese	el Range (	Organics	
Client tD: PBS	Batch ID: 14	374	F	RunNo: 2	0083				
Prep Date: 7/23/2014	Analysis Date: 7	/23/2014	S	SeqNo: 5	83900	Units: %RE	С		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.0	10.00		80.4	57.9	140			
Sample ID LCS-14374	SampType: <b>LC</b>	s	Tes	tCode: El	PA Method	8015D: Diese	el Range C	Organics	
Client ID: LCSS	Batch ID: 14	374	R	lunNo: 2	0083		_		
Prep Date: 7/23/2014	Analysis Date: 7	/23/2014	S	SeqNo: 5	83901	Units: %RE	С		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

#### Qualifiers:

Surr: DNOP

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range Ε
- Analyte detected below quantitation limits
- Ο RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit

77.0

57.9

5.000

140

Sample pH greater than 2.

Reporting Detection Limit

Page 4 of 6

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1407981

25-Jul-14

Client:

Blagg Engineering

Project:

Barrett A 1E

Sample ID MB-14325 MK

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: R20059

RunNo: 20059

Prep Date:

Analysis Date: 7/22/2014

SeqNo: 583538

Units: mg/Kg

Analyte

Result **PQL** 5.0

Gasoline Range Organics (GRO)

ND 840

SPK value SPK Ref Val %REC LowLimit HighLimit

120

**RPDLimit** Qual

Surr: BFB

1000

83.7

80

Sample ID LCS-14325 MK

RunNo: 20059

TestCode: EPA Method 8015D: Gasoline Range

Prep Date:

Client ID: LCSS

Batch ID: R20059 Analysis Date: 7/22/2014

SampType: LCS

SeqNo: 583539

Units: mg/Kg

HighLimit

%RPD

Qual

Analyte Gasoline Range Organics (GRO) Result

**PQL** SPK value SPK Ref Val 5.0 25.00

%REC 95.7

71.7

LowLimit

134

%RPD

**RPDLimit** 

Surr: BFB

24 920

1000

0

92.2

80

120

## Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range Е
- Analyte detected below quantitation limits
- RSD is greater than RSDlimit 0 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

Reporting Detection Limit

Sample pH greater than 2.

RL

Page 5 of 6

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1407981

25-Jul-14

Client:

Blagg Engineering

Project:

Barrett A 1E

Sample ID MB-14325 MK	Samp <sup>-</sup>	Type: M	BLK	Tes						
Client ID: PBS	Batc	h ID: R2	:0059	F	RunNo: 2	0059				
Prep Date:	Analysis [	Date: <b>7</b> /	22/2014	S	SeqNo: 5	83676	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	0.97		1.000		96.7	80	120			

Sample ID LCS-14325 MK	Samp <sup>*</sup>	Type: LC	s	Tes	tCode: E	tiles	•			
Client ID: LCSS	Bato	h ID: R2	20059	F	RunNo: 2	0059				
Prep Date: 7/21/2014	Analysis Date: 7/22/2014			5	SeqNo: 5	83677	Units: mg/k	<b>(</b> g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	. 0	93.1	80	120			
Toluene	0.92	0.050	1.000	0	91.7	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.7	80	120			
Surr: 4-Bromofluorobenzene	11		1 000		108	ลด	120			

#### Qualifiers:

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

Page 6 of 6



Hall Environmental Analysis Laboratory 4901 Hawkins NE

Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: BLAGG Work Order Numbe	r. 1407981		RcptNo:	1
Received by/date: US 07/22/14	· · · · · · · · · · · · · · · · · · ·			
Logged By: Celina Sessa 7/22/2014 8:00:00 AM	4	Celin S	-	
Completed By: Celina Sessa 7/22/2014 8:23:13 AM	1	Celin S		
Reviewed By: 10 07/22/2014		and J		
Chain of Custody				
Custody seals intact on sample bottles?	Yes 🗌	No 🗆	Not Present	
2. Is Chain of Custody complete?	Yes 🗹	No 🗆	Not Present	
3. How was the sample delivered?	Courier	·		•
<u>Log In</u>				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	NA 🗌	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗆	na 🗆	•
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗀		
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗆		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗆		
9. Was preservative added to bottles?	Yes 🗌	. No 🗹	NA 🗆	
10.VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials 🗹	
11. Were any sample containers received broken?	Yes	No 🗹	# of preserved	
40-	🖼		bottles checked	
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)			,	
16. Was client notified of all discrepancies with this order?	Yes 🗌	No 🗆	NA 🗹	
Person Notified: Date:				
By Whom: Via:	eMail	Phone 🗌 Fax	☐ In Person	
Regarding:	mand A Street and a state of the second		100 to 10	
Client Instructions:	ar a caracta da la	1.24 /s 111 v.a.		
17. Additional remarks:				
18. Cooler Information  Cooler No Temp °C Condition Seal Intact Seal No 1  1 1.8 Good Yes	Seal Date	Signed By		,

C	hain-	ot-Cu	istody Record	Turn-Around	Time:	SY TUES	١.			<b>a.</b>				AET.	7 T S.	•	n:e		<b></b>	<b>.</b> .	
Client:	BLAGE	Engila	neerns Inc.	□ Standard	K∕Rush	7/22/2014	) L												NT/ NTO		<b>"</b>
	20 A	MELL	A	Project Name	) <b>:</b>			Ţ.							nent						
Mailing	Address	POI	seerny Inc. A Box 87	Bar	rett A	1E		49	01 H				•				ын М 87	109			
	SUDM	field	NM 87413	Project #:			1	Τe	el. 50	)5-34	5-39	975	F	ax	505-	345-	<del>-4</del> 10	7			
			20-1183				1-31	and a second		1.4.2										ويسم تعدلات	C
email o				Project Mana	ger:		_	(كِاد	$\widehat{g}$					(۵۲							Π
QA/QC I			□ Level 4 (Full Validation)	J. BLAGE			s (8021	+ TPH (Gas only)	<b>料</b> /02			SIMS)		PO4,S	PCB's						
Accredi		□ Othe	er	Sampler: J-B-A46  On Ice: ■ Yes □ No □ No □ Sample Temperature: 1,80				+ TPH	30 / DF	18.1)	04.1)	8270		) <sub>3</sub> ,NO <sub>2</sub> ,	/ 8082	İ	a			į	N Z
□ EDD	(Type)			Sample Tem	erature: [	80	]	H	(G	4 bc	2 D	0 0	stals	),N	ides	8	8	S			<u>&gt;</u>
Date	Time	Matrix		Container Type and #	Preservative Type	HEAL NO. 10	BTEX + MTAR + TME(s (8021)	BTEX + MTBE	ТРН 8015В (GRO / DRO / 1480)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO₄)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Bubbles (Y or N)
1/18/4	1355	SOIL	WEST WALL 4-PE	402×1	cour		X		X									X			
M	1405		WEST WALL 4-PE 8-15- NORTH Wall 2-PE 15-18	1¢	R	-007	x,		X									X			
P																					
							_													<u> </u>	_
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Date: 7/18/14 Date:	Time: 2000	Relinquish Religquish	11 15 logg	Received by: Received by:	ie Wee	Date Time  18/14 2060  Date Time	Rer	nark	s:	·	Bi	и	E	ر ۲ ۲	766	,					1
1/2/14	1824	1	Mix the last Environmental may be sub-	Celin	- Sun-	07/22/14 0800															

Lab Order 1407A36

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/28/2014

**CLIENT:** Blagg Engineering

Collection Date: 7/21/2014 1:10:00 PM

Client Sample ID: SW Corner 2-pt @ 8'-18'

Project: Lab ID:

Barrett A 1E

1407A36-001

Matrix: SOIL

Received Date: 7/23/2014 7:56:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	· ND	10	mg/Kg	1	7/23/2014 11:42:56 AM	14374
Surr: DNOP	84.9	57.9-140	%REC	1	7/23/2014 11:42:56 AM	14374
EPA METHOD 8015D: GASOLINE RA	ANGE				Analyst	DJF
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/23/2014 12:06:06 PM	R20101
Surr: BFB	86.1	80-120	%REC	1	7/23/2014 12:06:06 PM	R20101
EPA METHOD 8021B: VOLATILES					Analyst:	DJF
Benzene	ND	0.049	mg/Kg	1	7/23/2014 12:06:06 PM	R20101
Toluene	ND	0.049	mg/Kg	1	7/23/2014 12:06:06 PM	R20101
Ethylbenzene	ND	0.049	mg/Kg	1	7/23/2014 12:06:06 PM	R20101
Xylenes, Total	ND	0.097	mg/Kg	1	7/23/2014 12:06:06 PM	R20101
Surr: 4-Bromofluorobenzene	95.0	80-120	%REC	1	7/23/2014 12:06:06 PM	R20101
EPA METHOD 300.0: ANIONS					Analyst:	JRR
Chloride	ND	30	mg/Kg	20	7/23/2014 11:49:38 AM	14378

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
- $\mathbf{o}$ RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- 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 Page 1 of 8
  - Sample pH greater than 2.
- RLReporting Detection Limit

## Lab Order 1407A36

Date Reported: 7/28/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Barrett A 1E

Blagg Engineering

**Lab ID:** 1407A36-002

Project:

Matrix: SOIL

Client Sample ID: E Wall 3-pt @ 8'-18'

**Collection Date:** 7/22/2014 11:44:00 AM

Received Date: 7/23/2014 7:56:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/23/2014 1:24:51 PM	14374
Surr: DNOP	79.8	57.9-140	%REC	1	7/23/2014 1:24:51 PM	14374
EPA METHOD 8015D: GASOLINE RA	ANGE				Analyst	DJF
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	7/23/2014 12:34:42 PM	R20101
Surr: BFB	86.0	80-120	%REC	1	7/23/2014 12:34:42 PM	R20101
EPA METHOD 8021B: VOLATILES			•		Analyst	: DJF
Benzene	ND	0.042	mg/Kg	1	7/23/2014 12:34:42 PM	R20101
Toluene	ND	0.042	mg/Kg	1	7/23/2014 12:34:42 PM	R20101
Ethylbenzene	ND	0.042	mg/Kg	1	7/23/2014 12:34:42 PM	R20101
Xylenes, Total	ND	0.084	mg/Kg	1	7/23/2014 12:34:42 PM	R20101
Surr: 4-Bromofluorobenzene	94.6	80-120	%REC	1	7/23/2014 12:34:42 PM	R20101
EPA METHOD 300.0: ANIONS					Analyst	JRR
Chloride	55	30	mg/Kg	20	7/23/2014 12:26:53 PM	14378

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

#### Qualifiers:

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

Page 2 of 8

- P Sample pH greater than 2.
- RL Reporting Detection Limit

#### Lab Order 1407A36

Date Reported: 7/28/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: S Wall 3-pt @ 8'-18'

Project: Barrett A 1E

Collection Date: 7/22/2014 11:48:00 AM

**Lab ID:** 1407A36-003

Received Date: 7/23/2014 7:56:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/23/2014 1:46:26 PM	14374
Surr: DNOP	76.4	57.9-140	%REC	1	7/23/2014 1:46:26 PM	14374
EPA METHOD 8015D: GASOLINE R.	ANGE				Analys	t: DJF
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1	7/23/2014 1:03:22 PM	R20101
Surr: BFB	87.0	80-120	%REC	1	7/23/2014 1:03:22 PM	R20101
EPA METHOD 8021B: VOLATILES					Analys	t: DJF
Benzene .	ND	0.034	mg/Kg	1	7/23/2014 1:03:22 PM	R20101
Toluene	ND	0.034	mg/Kg	1	7/23/2014 1:03:22 PM	R20101
Ethylbenzene	ND	0.034	mg/Kg	1	7/23/2014 1:03:22 PM	R20101
Xylenes, Total	ND	0.067	mg/Kg	1	7/23/2014 1:03:22 PM	R20101
Surr: 4-Bromofluorobenzene	94.9	80-120	%REC	1	7/23/2014 1:03:22 PM	R20101
EPA METHOD 300.0: ANIONS					Analys	t: JRR
Chloride	ND	30	mg/Kg	20	7/23/2014 12:39:17 PM	<b>14378</b> .

Matrix: SOIL

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

#### Qualifiers:

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

Page 3 of 8

- P Sample pH greater than 2.
- RL Reporting Detection Limit

#### Lab Order 1407A36

Date Reported: 7/28/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Base 3-pt @ 20'

Project:

Barrett A 1E

Collection Date: 7/22/2014 11:51:00 AM

Lab ID:

): 1407A36-004

Matrix: SOIL

Received Date: 7/23/2014 7:56:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/23/2014 2:08:11 PM	14374
Surr: DNOP	77.8	57.9-140	%REC	1	7/23/2014 2:08:11 PM	14374
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	t: <b>DJF</b>
Gasoline Range Organics (GRO)	ND	46	mg/Kg	10	7/23/2014 1:31:55 PM	R20101
Surr: BFB	85.5	80-120	%REC	10	7/23/2014 1:31:55 PM	R20101
EPA METHOD 8021B: VOLATILES					Analys	t: <b>DJF</b>
Benzene	ND	0.046	mg/Kg	1	7/23/2014 1:31:55 PM	R20101
Toluene	ND	0.046	mg/Kg	1	7/23/2014 1:31:55 PM	R20101
Ethylbenzene	ND	0.046	mg/Kg	1	7/23/2014 1:31:55 PM	R20101
Xylenes, Total	ND	0.092	mg/Kg	1	7/23/2014 1:31:55 PM	R20101
Surr: 4-Bromofluorobenzene	93.4	80-120	%REC	1	7/23/2014 1:31:55 PM	R20101
EPA METHOD 300.0: ANIONS					Analys	t: <b>JRR</b>
Chloride	ND	30	mg/Kg	20	7/23/2014 12:51:41 PM	1 14378

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

#### Qualifiers:

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

Page 4 of 8

- P Sample pH greater than 2.
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1407A36

28-Jul-14

Client:

Blagg Engineering

Project:

Barrett A 1E

Sample ID MB-14378

SampType: MBLK

TestCode: EPA Method 300.0: Anions

LowLimit

Client ID:

PBS

Batch ID: 14378

RunNo: 20105

Prep Date: 7/23/2014 Analysis Date: 7/23/2014

SeqNo: 584505

SPK value SPK Ref Val %REC

Units: mg/Kg

Analyte

**PQL** 

HighLimit

**RPDLimit** 

Qual

Chloride

ND 1.5

Result

Sample ID LCS-14378

SampType: LCS

TestCode: EPA Method 300.0: Anions

LCSS Client ID:

Batch ID: 14378

RunNo: 20105

Prep Date: 7/23/2014 Analysis Date: 7/23/2014

SeqNo: 584506

Units: mg/Kg

HighLimit %RPD **RPDLimit** Qual

%RPD

Analyte

Result PQL SPK value SPK Ref Val

110

%REC LowLimit Chloride 14 1.5 15.00 91.8

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

Value above quantitation range Е

Analyte detected below quantitation limits

RSD is greater than RSDlimit O

RPD outside accepted recovery limits

Spike Recovery outside accepted recovery limits S

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

Reporting Detection Limit

Sample pH greater than 2.

RL

Page 5 of 8

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1407A36

28-Jul-14

Client:

Blagg Engineering

Project: Barrett	A 1E
Sample ID MB-14374	SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 14374 RunNo: 20083
Prep Date: 7/23/2014	Analysis Date: 7/23/2014 SeqNo: 583900 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10
Surr: DNOP	8.0 10.00 80.4 57.9 140
Sample ID LCS-14374	SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: LCSS	Batch ID: 14374 RunNo: 20083
Prep Date: 7/23/2014	Analysis Date: 7/23/2014 SeqNo: 583901 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	47 10 50.00 0 93.8 68.6 130
Surr: DNOP	3.8 5.000 77.0 57.9 140
Sample ID MB-14414	SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 14414 RunNo: 20106
Prep Date: 7/24/2014	Analysis Date: 7/24/2014 SeqNo: 584672 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	8.9 10.00 89.1 57.9 140
Sample iD LCS-14414	SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: LCSS	Batch ID: 14414 RunNo: 20106
Prep Date: 7/24/2014	Analysis Date: 7/24/2014 SeqNo: 584673 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	4.6 5.000 91.5 57.9 140
Sample ID MB-14393	SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 14393 RunNo: 20106
Prep Date: 7/23/2014	Analysis Date: 7/24/2014 SeqNo: 585046 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	9.4 10.00 94.2 57.9 140
Sample ID LCS-14393	SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: LCSS	Batch ID: 14393 RunNo: 20106
Prep Date: 7/23/2014	Analysis Date: 7/24/2014 SeqNo: 585047 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

#### Qualifiers:

Surr: DNOP

Value exceeds Maximum Contaminant Level.

4.9

- Ε Value above quantitation range
- Analyte detected below quantitation limits J
- RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits S
- Analyte detected in the associated Method Blank

57.9

140

- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit

97.9

Sample pH greater than 2.

5.000

Reporting Detection Limit

Page 6 of 8

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1407A36 28-Jul-14

Client:

Blagg Engineering

Project:

Barrett A 1E

Sample ID MB-14359 MK

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: R20101

RunNo: 20101

Analysis Date: 7/23/2014

SeqNo: 584415

Units: mg/Kg

Prep Date:

Analyte

Result PQL ND

5.0

%REC LowLimit

HighLimit

120

**RPDLimit** %RPD

Qual

Gasoline Range Organics (GRO) Surr: BFB

860

1000

SPK value SPK Ref Val

86.3

80

Sample ID LCS-14359 MK Client ID: LCSS

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

RunNo: 20101

Batch ID: R20101

Units: mg/Kg

Prep Date:

Analysis Date: 7/23/2014

SeqNo: 584416

Qual

Analyte Gasoline Range Organics (GRO) Result SPK value SPK Ref Val **PQL** 

25.00

%REC LowLimit 111 93.9

71.7

HighLimit

%RPD

28 5.0 940

0

80

Surr: BFB

1000

134 120

**RPDLimit** 

Qualifiers:

Value exceeds Maximum Contaminant Level.

Spike Recovery outside accepted recovery limits

Value above quantitation range Е

Analyte detected below quantitation limits RSD is greater than RSDlimit 0

RPD outside accepted recovery limits R

В Analyte detected in the associated Method Blank

ND

Sample pH greater than 2.

Н

Reporting Detection Limit

Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit Page 7 of 8

# Hall Environmental Analysis Laboratory, Inc.

WO#: 1407A36

28-Jul-14

Client:

Blagg Engineering

Project:

Barrett A 1E

Project:	Barrett A										
Sample ID	MB-14359 MK	Samp	Гуре: М	ЗLК	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batc	h ID: R2	0101	F	RunNo: 2	0101				
Prep Date:		Analysis [	Date: 7/	23/2014	5	SeqNo: 5	84469	Units: mg/h	(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-Brom	nofluorobenzene	0.96		1.000		95.6	80	120			
Sample ID	LCS-14359 MK	Samp	Type: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batcl	h ID: <b>R2</b>	0101	F	RunNo: 2	0101				
Prep Date:	7/22/2014	Analysis D	)ate: <b>7</b> /	23/2014	8	SeqNo: <b>5</b>	84470	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.3	0.050	1.000	0 ·	125	80	120			S
Toluene		1.1	0.050	1.000	0	110	80	120			
Ethylbenzene		1.0	0.050	1.000	0	104	80	120			
Xylenes, Total		3.1	0.10	3.000	0	103	80	120			
Surr: 4-Brom	nofluorobenzene	0.97		1.000		96.6	80	120			
Sample ID	1407A36-001AMS	Samp1	ype: <b>M</b> \$	3	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID:	SW Corner 2-pt (	@ 8' Batcl	n ID: <b>R2</b>	0101	F	RunNo: 20	0101				
Prep Date:		Analysis E	)ate: 7/	23/2014	Ş	SeqNo: 5	R4472	Units: mg/K	·~		
Analyte						ocqivo. J		Ormo. mg/	.9		
		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual _
Benzene		Result	PQL 0.049			•		•	-	RPDLimit	Qual
				SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	-	RPDLimit	Qual
Toluene		1.2	0.049	SPK value 0.9747	SPK Ref Val	%REC 128	LowLimit 77.4	HighLimit 142	-	RPDLimit	Qual
Toluene Ethylbenzene		1.2 1.1	0.049 0.049	SPK value 0.9747 0.9747	SPK Ref Val 0 0.006082	%REC 128 111	LowLimit 77.4	HighLimit 142 132	-	RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total	nofluorobenzene	1.2 1.1 1.0	0.049 0.049 0.049	SPK value 0.9747 0.9747 0.9747	SPK Ref Val 0 0.006082 0	%REC 128 111 106	77.4 77 77.6	HighLimit 142 132 134	-	RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom	nofluorobenzene	1.2 1.1 1.0 3.1 0.96	0.049 0.049 0.049	SPK value 0.9747 0.9747 0.9747 2.924 0.9747	SPK Ref Val 0 0.006082 0 0	%REC 128 111 106 106 98.8	LowLimit 77.4 77 77.6 77.4 80	HighLimit  142 132 134 132	%RPD	RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom		1.2 1.1 1.0 3.1 0.96	0.049 0.049 0.049 0.097	SPK value 0.9747 0.9747 0.9747 2.924 0.9747	SPK Ref Val 0 0.006082 0 0	%REC 128 111 106 106 98.8	LowLimit 77.4 77 77.6 77.4 80	HighLimit 142 132 134 132 120	%RPD	RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID	1407A36-001AMS	1.2 1.1 1.0 3.1 0.96	0.049 0.049 0.049 0.097 ype: <b>MS</b>	SPK value 0.9747 0.9747 0.9747 2.924 0.9747	SPK Ref Val 0 0.006082 0 0	%REC 128 111 106 106 98.8	77.4 77.6 77.4 80 PA Method	HighLimit 142 132 134 132 120	%RPD	RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID:	1407A36-001AMS	1.2 1.1 1.0 3.1 0.96 SD SampT <b>@ 8'</b> Batch Analysis D	0.049 0.049 0.049 0.097 ype: MS n ID: R2 pate: 7/	SPK value 0.9747 0.9747 2.924 0.9747 6D 0101 23/2014 SPK value	SPK Ref Val  0 0.006082 0 0 Tes: F S SPK Ref Val	%REC 128 111 106 106 98.8 tCode: EF RunNo: 20	2A Method 0101 LowLimit	HighLimit 142 132 134 132 120  8021B: Volat Units: mg/K	%RPD  iles  g  %RPD	RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte	1407A36-001AMS	1.2 1.1 1.0 3.1 0.96 SD SampT @ 8' Batch Analysis D Result	0.049 0.049 0.049 0.097 ype: MS DID: R2 Date: 7/	SPK value 0.9747 0.9747 2.924 0.9747  6D 0101 23/2014 SPK value 0.9747	SPK Ref Val 0 0.006082 0 0 Tes: F SPK Ref Val 0	%REC 128 111 106 106 98.8 tCode: EF RunNo: 26 SeqNo: 56 %REC 121	LowLimit 77.4 77 77.6 77.4 80 PA Method 0101 84473 LowLimit 77.4	HighLimit  142 132 134 132 120  8021B: Volat  Units: mg/K  HighLimit 142	%RPD  illes  g  %RPD  5.56	RPDLimit 20	
Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene	1407A36-001AMS	1.2 1.1 1.0 3.1 0.96 SD SampT @ 8' Batch Analysis D Result 1.2 1.0	0.049 0.049 0.097 0.097 vype: MS o ID: R2 Oate: 7/ PQL 0.049 0.049	SPK value 0.9747 0.9747 2.924 0.9747  6D 0101 23/2014 SPK value 0.9747 0.9747	SPK Ref Val 0 0.006082 0 0 Tes: F SPK Ref Val 0 0.006082	%REC 128 111 106 106 98.8  **Code: EF RunNo: 20 SeqNo: 58 %REC 121 105	LowLimit 77.4 77 77.6 77.4 80  PA Method 0101 84473  LowLimit 77.4 77	HighLimit 142 132 134 132 120  8021B: Volat  Units: mg/K  HighLimit 142 132	%RPD  iles  g  %RPD  5.56 6.05	RPDLimit 20 20	
Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene Toluene	1407A36-001AMS	1.2 1.1 1.0 3.1 0.96 SD SampT @ 8' Batch Analysis D Result 1.2 1.0 0.99	0.049 0.049 0.097 vype: MS o ID: R2 0ate: 7/ PQL 0.049 0.049	SPK value 0.9747 0.9747 2.924 0.9747  6D 0101 23/2014 SPK value 0.9747 0.9747 0.9747	SPK Ref Val 0 0.006082 0 0 Tes: F SPK Ref Val 0 0.006082 0	%REC 128 111 106 106 98.8  tCode: EF RunNo: 26 SeqNo: 56 %REC 121 105 102	CowLimit 77.4 77.6 77.4 80 PA Method 0101 84473 LowLimit 77.4 77 77.6	HighLimit 142 132 134 132 120  8021B: Volat  Units: mg/K  HighLimit 142 132 134	%RPD  illes  9  %RPD  5.56 6.05 4.69	RPDLimit 20 20 20 20	
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	1407A36-001AMS	1.2 1.1 1.0 3.1 0.96 SD SampT @ 8' Batch Analysis D Result 1.2 1.0	0.049 0.049 0.097 0.097 vype: MS o ID: R2 Oate: 7/ PQL 0.049 0.049	SPK value 0.9747 0.9747 2.924 0.9747  6D 0101 23/2014 SPK value 0.9747 0.9747	SPK Ref Val 0 0.006082 0 0 Tes: F SPK Ref Val 0 0.006082	%REC 128 111 106 106 98.8  **Code: EF RunNo: 20 SeqNo: 58 %REC 121 105	LowLimit 77.4 77 77.6 77.4 80  PA Method 0101 84473  LowLimit 77.4 77	HighLimit 142 132 134 132 120  8021B: Volat  Units: mg/K  HighLimit 142 132	%RPD  iles  g  %RPD  5.56 6.05	RPDLimit 20 20	

## Qualifiers:

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

RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: BLAGG Work Order Number	r: 1407A36		RcptNo:	1
Received by/date: CS 07/73/14			_	
Logged By: Anne Thorne 7/23/2014 7:56:00 AM	· I	anne Stan	_	
Completed By: Anne Thorne 7/23/2014		aone Am	_	
Reviewed By: 20 07/23/19		and gran		
Chain of Custody				
1. Custody seals intact on sample bottles?	Yes 🗌	No 🗆	Not Present	
2. Is Chain of Custody complete?	Yes 🗹	No 🗌	Not Present	
3. How was the sample delivered?	Courier			
<u>Log In</u>			•	
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗌	NA 🗆	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗌	na 🗆	
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗆		,
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗀		
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗆	
10.VOA vials have zero headspace?	Yes	No 🗆	No VOA Vials	
11. Were any sample containers received broken?	Yes	No 🗹 [		
		_	# of preserved bottles checked	
12. Does paperwork match bottle labels?	Yes 🗹	No 🗌	for pH:	>12 unless noted)
(Note discrepancies on chain of custody)  13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No □	Adjusted?	- 12 dilesa noted)
14. Is it clear what analyses were requested?	Yes 🗹	No 🗆	_	
15. Were all holding times able to be met?	Yes 🗹	No 🗆	Checked by:	
(If no, notify customer for authorization.)		l		
Special Handling (if applicable)				•
16. Was client notified of all discrepancies with this order?	Yes 🗌	No 🗀	NA 🗹	
Person Notified: Date			· · · · · · · · · · · · · · · · · · ·	
By Whom: Via:	eMail	Phone  Fax	☐ In Person	
Regarding:				
Client Instructions:				·
17. Additional remarks:	·			ı
18. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No 1 2.1 Good Yes	Seal Date	Signed By		

Client:	Blagg Engineering, Inc.			□ Standard	∭Rush	)		] -			NA	LŶ	SIS	LA	BO	RA	TOR	- ey
	BP America			Project Name	e:										ental.			
Mailing Add	ress:	P.O. Box	¢ 87	1	Barrett A 1E				490	1 Hav						NM 8	7109	
			eld, NM 87413	Project #:					Tel	505-	345-3	3975	F	ax 5	05-34	45-41	07	
Phone #:		(505)320	J-1183					٠ الم				Analy	ysis	Requ	est			70.0
email or Fax	<b>κ#</b> :			Project Mana	ager:													
QA/QC Packa	age:				Jeff Blagg										ł		1 1	
<b>X</b> Standard	l		☐ Level 4 (Full Validation	)						8						ļ		
□ Other				Sampler: Jeff Blagg				]		밁								E
□ EDD (Typ	pe)			On ice ⊠Yes □ No Sample Temperature: 2 / °						(GRO / DRO)								5
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type			BTEX (8021)		TPH 8015B							Chloride	Air Bubbles (Y
07/21/2014	13:10	Soil	SW Corner 2-pt @ 8'-18'	1x 4oz	cool	-0	•	х		x							x	
07/22/2014	11:44	Soil	E Wall 3-pt @ 8'-18'	1x 4oz	cool	-0	U2	х		x							×	
07/22/2014	11:48	Soil	S Wall 3-pt @ 8'-18'	1x 4oz	cool		(3	x		x							х	
07/22/2014	11:51	Soil	Base 3-pt @ 20"	1x 4oz	cool		04	х		x							x	
				, ;														
											<u>.</u>							
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		D the whole		Received by:		Date Tin					<u> </u>	<u></u>						
Date: 27/2014	Time:	Relinquish	y Blogg	i -	Walle	71	155	BP C	onta	ct: Je	Blagg off Pe	ace	PI	ease	сору	resul	ts to:	
Date:	Time:	Relinquish	ed by:	Received by:		Date Tin	ne	peac	е.јеп	геу@	bp.co	m						
122/14	1800	M	isturbeles	Celin	- Jun 1	07/23/14 07	756											

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.