# OIL CONS. DIV DIST. 3

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

State of New Mexico
Energy Minerals and Natural Resources

MAY 1 4 2015

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	ncis Dr., Sant	ta Fe, NM 8750	5	S	anta F	e, NM 875	505							
			Rele	ease Notifi	catio	n and Co	orrective A	ction						
						<b>OPERA</b>	TOR		Initi	al Report	$\boxtimes$	Final Repor		
Name of Co	ompany: B	SP.				Contact: Jef	ff Peace							
Address: 20	00 Energy	Court, Farm	ington, N	M 87401		Telephone No.: 505-326-9479								
Facility Na	me: Floran	ice 100				Facility Typ	e: Natural gas v	well						
Surface Owner: Federal  Mineral Owner: Federal  API No. 3004520064  LOCATION OF RELEASE														
Unit Letter	Section	Township	Range	Feet from the	_	/South Line	Feet from the	Fact/V	Vest Line	County: S	on Inor			
P	30	30N	8W	1,170	South		945	East	Vest Line	County, 3	an Juai	1		
		Lat	itude3	6.77837	•	_ Longitud	<b>e</b> 107.71039_							
					TURE	OF REL	EASE							
Type of Rele	ase: conder	isate/oil – hist	oric releas	e		Volume of	Release: unknow	/n	Volume F	Recovered: 1	NA			

		La	titude3	6.77837		Longitud	<b>e</b> 107.71039_		_
				NA	TURE	OF REL	EASE		
Type of Rel	ease: conden	sate/oil – his	toric releas	se		Volume of	Release: unknov	vn Volui	me Recovered: NA
		own – likely					Iour of Occurrence	ce: Date:	and Hour of Discovery: 9/26/2013;
Was Immed	iate Notice (		] Yes 🗵	No Not	Required	If YES, To	Whom?		
By Whom?						Date and F	lour:		
Was a Wate	rcourse Read	ched?	] Yes ⊠	] No		If YES, Vo	lume Impacting	the Watercours	3.
If a Waterco	ourse was Im	pacted, Desc	ribe Fully.	*					
Describe Ca	use of Probl	em and Reme	edial Actio	n Taken.	SUPPLEM	ENTAL IN	FORMATION		
* Groundwe	tar complex	wara takan at	for avanya	tion of impostor	l coile wee	aammlatad I	Votor complex via	ma man dataat f	on DTEV but sulfate and TDC
above the li	mits. A sami	ole of produc	ed water fi	rom another nea	rby BP one	erated Picture	ed Cliffs well was	s taken to deter	or BTEX, but sulfate and TDS were mine if produced water had
impacted the	e water samp	les taken at t	he Floranc	te 100. The prod	duced water	r sample ana	lysis showed non	-detect for sulfa	ate and TDS of 820 ppm, indicating
									er analysis data are attached.
Describe Ar	ea Affected :	and Cleanup	Action Tal	ven *					
Describe 711	ca miceted (	and Creamup	rection Tar	COII.					
71. 1									
									pursuant to NMOCD rules and
									releases which may endanger relieve the operator of liability
									vater, surface water, human health
or the enviro	onment. In a	ddition, NM0	OCD accep	otance of a C-14	1 report do	es not reliev	e the operator of	responsibility for	or compliance with any other
federal, state	e, or local lav	vs and/or reg	ulations.						
	1 00	1					OIL CON	SERVATIO	DN DIVISION /
Signature:	19KK	Peses	2					//	1 Al Et
8	YOU	1			Δ	onnroved by	Environmental S	necialist:	my )
Printed Nam	e: Jeff Peace	2				approved by	Environmental 5	peciarist.	/ / / / / /
Title: Field	Environment	al Coordinate	or		A	approval Dat	e: (a/20 /	15 Expirati	ion Date:
						TP-C-GI Du	42/	Empiral	
E-mail Addı	ess: peace.je	ffrey@bp.co	m		C	Conditions of	Approval:		Attached
Datas Mari	0 2015	T	Ohana, EAE	226 0470					, taterior
Date: May	0, 2013	1	Phone: 505	-320-94/9					

\* Attach Additional Sheets If Necessary

ANCS 15/8/150466

# **BP AMERICA PRODUCTION COMPANY**

# FLORANCE # 100 (PC) - (Two unknown source release discoveries)

Unit Letter P, Section 30, T30N, R08W - API Number: 30-045-20064

## Field & Laboratory Data from Groundwater Monitor Wells & Formation Produced Water

	FIELD PARAMETERS														
SAMPLE ID	SAMPLE DATE	SAMPLE TIME	DEPTH TO WATER (feet)	TOTAL MW LENGTH (feet)	рН	Conductivity (µmhos/cm)	Temperature (°Celcius)	Volume Purged (gallons)							
MW # 1 (background) 1	04/16/14	0920	21.48	35.34	6.50	1,100	13.3	6.75							
11 2	11/05/14	1300	21.60	11	6.92	1,000	17.1	6.75							
MW # 2 (source)	04/16/14	1025	23.78	36.26	6.51	1,800	14.2	6.25							
11 2	11/05/14	1400	24.42	11	7.32	1,300	14.7	5.75							
MW # 3 (source)	04/16/14	1130	28.69	34.09	6.52	1,500	14.4	2.75							
11 2	11/05/14	1500	29.69	п	7.15	1,100	14.8	2.25							
ate GC BN 001 (PC) - 21 bbl BGT PRODUCED WATER	02/20/15	1035	NA	NA	NA	NA	NA	NA							
			NMWQC	C STANDARDS -	6-9										

		LABORATORY PARAMETERS														
SAMPLE ID	Fluoride	Chloride	Sulfate	Nitrate-	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 (background) 1	ND	12	1,800	ND	3,100	ND	ND	ND	ND							
11 2	NA	NA	1,700	NA	3,100	NA	NA	NA	NA							
MW # 2 (source)	0.87	6.3	2,500	ND	4,000	ND	ND	ND	ND							
11 2	NA	NA	2,500	NA	3,770	NA	NA	NA	NA							
MW # 3 (source)	0.60	24	1,700	ND .	2,960	ND	ND	ND	ND							
	NA	NA	1,700	NA	2,930	NA	NA	NA	NA							
State GC BN 001 (PC) - 21 bbl BGT PRODUCED WATER	NA	NA	ND	ND	820	NA	NA	NA	NA							
NMWQCC STANDARDS -	1.6	250	600	10	1,000	10	750	750	620							

Notes:

Depth to water measured from casing top of monitor well.

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

MW - Monitor well

umhos/cm - Micromhos per centimeter

TDS - Total dissolved solids

mg/L - Milligram per Liter

μg/L - Microgram per liter

ND - Not detected at Reporting Limit

NA - Not available or applicable

NMWQCC - New Mexico Water Quality Control Commission

#### Lab Order 1502A24

Date Reported: 3/2/2015

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: 21 BGT-Produced Water

Project: State GC BN #1

Collection Date: 2/20/2015 10:35:00 AM

Lab ID: 1502A24-001

Matrix: AQUEOUS

Received Date: 2/25/2015 7:30:00 AM

Analyses	Result	RL Q	ual (	Units	DF Date Analyzed B	atch
EPA METHOD 300.0: ANIONS					Analyst: L	.GT
Sulfate	ND	0.50		mg/L	1 2/27/2015 5:19:28 AM R	24552
SM2540C MOD: TOTAL DISSOLVE	D SOLIDS				Analyst: K	S
Total Dissolved Solids	820	200	*	mg/L	1 2/27/2015 8:17:00 AM 1	7895

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 3

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

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1502A24

02-Mar-15

Client:

Blagg Engineering

Project:

State GC BN #1

Sample ID MB

Prep Date:

SampType: MBLK

TestCode: EPA Method 300.0: Anions

%REC LowLimit

Client ID:

**PBW** 

Batch ID: R24552

PQL

Batch ID: R24552

PQL

0.50

RunNo: 24552

Analysis Date: 2/26/2015

Result

SPK value SPK Ref Val

SPK value SPK Ref Val

10.00

SeqNo: 723037

Units: mg/L HighLimit

%RPD

**RPDLimit** Qual

Analyte Sulfate

ND 0.50

Sample ID LCS

SampType: LCS

RunNo: 24552

Client ID: Prep Date:

Analysis Date: 2/26/2015

10

SegNo: 723038 %REC

99.7

Units: mg/L

110

HighLimit %RPD **RPDLimit** 

Qual

Analyte Sulfate

SampType: MBLK

0

90 TestCode: EPA Method 300.0: Anions

TestCode: EPA Method 300.0: Anions

LowLimit

Sample ID MB Client ID:

**PBW** 

LCSW

LCSW

Batch ID: R24552

RunNo: 24552

Prep Date:

Analysis Date: 2/26/2015

SegNo: 723091

Units: mg/L

Analyte

Result

SPK value SPK Ref Val %REC

LowLimit

HighLimit %RPD **RPDLimit** 

Qual

Sulfate

ND 0.50

Result

9.8

SampType: LCS

TestCode: EPA Method 300.0: Anions

RunNo: 24552

Prep Date:

Client ID:

Batch ID: R24552 Analysis Date: 2/26/2015

LowLimit

SeqNo: 723092 %REC

Units: mg/L

%RPD

Qual

Analyte Sulfate

PQL 0.50

10.00

**RPDLimit** 

Sample ID LCS

SPK value SPK Ref Val

0

98.1

HighLimit 110

Qualifiers:

R

Value exceeds Maximum Contaminant Level

Analyte detected below quantitation limits

RPD outside accepted recovery limits

Spike Recovery outside accepted recovery limits

E Value above quantitation range

RSD is greater than RSDlimit 0

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

ND

P Sample pH Not In Range

Reporting Detection Limit

Not Detected at the Reporting Limit Page 2 of 3

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1502A24 02-Mar-15

Client:

Blagg Engineering

Project:

State GC BN #1

Sample ID MB-17895

SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID:

PBW

Batch ID: 17895

RunNo: 24545

Prep Date:

Analyte

2/25/2015

Analysis Date: 2/27/2015

SeqNo: 722782

Units: mg/L HighLimit

**RPDLimit** Qual

Total Dissolved Solids

Result PQL ND 20.0

Sample ID LCS-17895

SampType: LCS

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: LCSW Batch ID: 17895

RunNo: 24545

Prep Date: 2/25/2015

Result

%REC

Units: mg/L

Analyte

Analysis Date: 2/27/2015 PQL

SeqNo: 722783

HighLimit %RPD **RPDLimit** Qual

%RPD

SPK value SPK Ref Val %REC LowLimit

LowLimit

120

1010 0 Total Dissolved Solids 20.0 1000 101 80

SPK value SPK Ref Val

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

Value above quantitation range E

Analyte detected below quantitation limits J

0 RSD is greater than RSDlimit

R RPD outside accepted recovery limits

Spike Recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

Sample pH Not In Range P RL Reporting Detection Limit Page 3 of 3



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

# Sample Log-In Check List

LABORATORY	Website: www.h	allenvironmental.	com		
Client Name: BLAGG	Work Order Numbe	r: 1502A24		RcptNo: 1	
Received by/date:	02 25	15			
Logged By: Ashley Gallegos	2/25/2015 7:30:00 AM	И	SA J		
Completed By: Ashley Gallegos	2/25/2015 9:48:12 AM	Л	AZ		
Reviewed By.	02/25/15		9		
Chain of Custody					
1. Custody seals intact on sample bottles?		Yes	No .	Not Present 🗸	
2. Is Chain of Custody complete?		Yes 🗸	No .	Not Present	
3. How was the sample delivered?		Courier			
Log In					
4. Was an attempt made to cool the sample	95?	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 te	st(s)?	Yes 🗸	No _		
8. Are samples (except VOA and ONG) pro	perly 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 br	oken?	Yes	No 🗹	# of preserved 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	Observation	
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 🗹	
Person Notified:	Date				
By Whom:	Via:	eMail	Phone 🗌 Fax	In Person	
Regarding:					
Client Instructions:					
17. Additional remarks:					
Cooler Information           Cooler No         Temp °C         Condition           1         1.2         Good	Seal Intact   Seal No   Yes	Seal Date	Signed By		

Chain-of-Custody Record				Turn-Around 1	Time:					ŀ	4 Δ	П	F	NΛ	/T [	20	INI I	ME	N7	ГА		
lient:	BLAG	G ENGR.	/ BP AMERICA		Rush_														AT			
				Project Name:							ww	w.ha	aller	viro	nme	ntal	.con	n				
Mailing A	ddress:	P.O. BO	X 87	S	TATE GC BN	V#1		49	01 H	ławk	ins	NE -	- All	ouqu	erq	ue, N	MI S	3710	9			
		BLOOM	FIELD, NM 87413	Project #:						)5-34							-410					
hone #:		(505) 63	2-1199									1	Anal	ysis	Red	ques	st					
email or F	ax#:			Project Manag	jer:		<u>~</u>							(FOS)								Γ
⊋A/QC Pa	_		Level 4 (Full Validation)		NELSON VE	LEZ	(8021B)	only)	/ MRO)			S)		Son							41	
Accreditat			·	Sampler:	NELSON VE	LEZ	1 00	TPH (Gas	RO/	1)	1)	SIM	72 V	F	ids	red)	2				mple	
□ NELAF	>	□ Other		On Ice:	√ Yes	□ No	TMB	) Hd.	/ DRO	118.	04	270		F	Sol	ilte	ite				Sa	E
□ EDD (	Гуре)			Sample Tempe	rature: 1,2		BE +	+	GRO	od 4	po	or 8	tals	1	lved	us (f	/ Nitrite N			9	osite	Y or
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1502A24	BTEX + MTBE	BTEX + MTBE	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO3,NO2,	Total Dissolved Solids	Iron, Ferrous (filtered)	Nitrate N /			Grab sample	5 pt. composite sample	phles
2/20/15	1035	WATER	21 BGT-PRODUCED WATER	500 ml - 1	Cool	-001								٧	V					٧		Γ
																						Γ
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								-												$\neg$		
																				$\dashv$		
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Date: /	Time:	Relinquish	ed by:	Received by:		Date Time	Rem	nark	s:													_
1/24/15	1315	10	la V	Miste	Watters	2/24/15 1315	BIL	L DI	RECT	LY T				_								
Date:	Time:	Relinquish		Received by:	PA	Date Time							ourt,	Farn	ningt	on, i	NIVI 8	7401	L.			
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.

To:

Brandon Powell, Cory Smith, NMOCD

From: Jeff Peace, BP

Date:

August 29, 2014

Re:

Florance 100 closure report

Brandon and Cory,

The attached map shows the locations of the three groundwater monitor wells BP installed at the Florance 100 after remediation of impacted soil was completed. All three monitor wells were non-detect for BTEX, but closure was not approved due to the high concentrations of sulfate in the monitor wells. This is the first time BP has had a remediation denied when BTEX concentrations were below the standards, and BP does not understand the denial due to sulfate since it is not the standard use to determine impacts to groundwater.

In spite of this, BP believes the data show the groundwater in the vicinity of the Florance 100 is normally high for sulfate and TDS. The upgradient well, MW No. 1 has sulfate of 1,800 mg/l and TDS of 3,100 mg/l. The two wells in the source area where excavation of impacted soil was done had sulfate of 2,500 mg/l and 1,700 mg/l, and TDS of 4,000 mg/l and 2,960 mg/l. This results in one of the monitor wells in the source area with sulfate and TDS concentrations less than those of the upgradient monitor well, and the other with concentrations of those constituents in the same range.

Based on this information, BP believes the sulfate and TDS concentrations in the monitor wells reflect natural or background conditions and are not the result of the impacted soil excavated at the Florance 100 site. Therefore BP believes the C-141 final report for the remediation should be approved by NMOCD.

If you have any questions or need additional information please let me know.

Sincerely yours,

Jeff Peace, PE

Area Environmental Advisor

(505) 326-9479

Peace.jeffrey@bp.com

# FIGURE 2 (2nd 1/4, 2014)



MW #5 (73.35)74.50 **APPARENT GROUNDWATER FLOW DIRECTION** ~N25.5E 76.50 5=1700 ng/l MW#3 (73.66)705=2960 mg/l PLUGGED & MW #4 **ABANDONED** (76.58)**MARKER** 78.50 5 = 2500 mg/l MW #2 (78.14) TDS = 4000 mg/l 80.50 (Upgradient Well)

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE PLUGGED & ABANDONED MARKER (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

MW #1 (84.64)

		Top of Well Elevation
	MW#1	(106.12)
	MW#2	(101.92)
	MW#3	(102.35)
	MW #4	(100.06)
	MW #5 (Initial Reference	(100.00) Point)
•	MW#1	Groundwater Elevation as of 04/18/14.

0 40 80 FT.

BP AMERICA PRODUCTION CO.

FLORANCE# 100

SE/4 SE/4 SEC. 30, T30N, R08W

SAN JUAN COUNTY, NEW MEXICO

## BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87 BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SURVEY
DRAWN BY: NJV

5 = 1800 mg/l

TDS = 3100 mg/l

FILENAME: FLORANCE 100-GW01.SKF DRAFTED: 04-18-14 NJV GROUNDWATER CONTOUR MAP 04/14

# BP AMERICA PRODUCTION COMPANY Florance # 100 - (Release of Unknown Source[s]) Unit Letter P, Section 30, T30N, R08W - API Number: 30-045-20064

SAMPLE ID	SA	AMPLE DATE	SAMPLE TIME	GRADE	APPROX. TOTAL DEPTH OF TEST WELL BELOW GRADE	Conductivity	Temperature	Volume Purged	pН	TDS	Sulfate	Iron	Benzene	Toluene	Ethyl - benzene	· ·
				(feet)	(feet)	(µmhos/cm)	(°Celcius)	(gallons)		(mg/L)	(mg/L)	(mg/L)	(ppb)	(ppb)	(ppb)	(ppb)
MW # 1 (background)		04/16/14	0920	19.08	32.94	1,100	13.3	6.75	6.50	3,100	1,800	0.22	ND	ND	ND	ND
MW # 2 (source)		04/16/14	1025	21.58	34.06	1,800	14.2	6.25	6.51	4,000	2,500	1.1	ND	ND	ND	ND
MW # 3 (source)		04/16/14	1130	26.39	31.79	1,500	14.4	2.75	6.52	2,960	1,700	0.30	ND	ND	ND	ND
NMWQCC STANDARDS (groundwai								oundwater) -	6-9	1,000	600	1.0	10	750	750	620

Notes:

TDS mg/L -

Total dissolved solids
Milligram per Liter.
Parts per billion or microgram per liter (µg/L). ppb -

ND - Not detected at Reporting Limit.
NMWQCC - New Mexico Water Quality Control Commission.



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

OrderNo.: 1404805

April 24, 2014

Nelson Velez Blagg Engineering P. O. Box 87 Bloomfield, NM 87413

TEL: (505) 320-3489 FAX (505) 632-3903

RE: Florance #100

#### Dear Nelson Velez:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/17/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

### Lab Order 1404805

Date Reported: 4/24/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: MW #1

**Project:** Florance #100

Collection Date: 4/16/2014 9:20:00 AM

Lab ID: 1404805-001

Matrix: AQUEOUS

Received Date: 4/17/2014 10:10:00 AM

Analyses	Result	RL Q	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	1.0		μg/L	1	4/17/2014 11:48:46 PM	R18059
Toluene	ND	1.0		μg/L	1	4/17/2014 11:48:46 PM	R18059
Ethylbenzene	ND	1.0		μg/L	1	4/17/2014 11:48:46 PM	R18059
Xylenes, Total	ND	2.0		μg/L	1	4/17/2014 11:48:46 PM	R18059
Surr: 4-Bromofluorobenzene	91.8	82.9-139		%REC	1	4/17/2014 11:48:46 PM	R18059
EPA METHOD 300.0: ANIONS						Analyst	JRR
Fluoride	ND	0.50		mg/L	5	4/17/2014 1:46:03 PM	R18079
Chloride	12	2.5		mg/L	5	4/17/2014 1:46:03 PM	R18079
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	4/17/2014 1:46:03 PM	R18079
Sulfate	1800	25	*	mg/L	50	4/18/2014 5:36:55 PM	R18097
EPA METHOD 200.7: METALS						Analyst	JLF
Iron	0.22	0.020		mg/L	1	4/22/2014 12:17:22 PM	12794
SM2540C MOD: TOTAL DISSOLVED SO	DLIDS					Analyst	KS
Total Dissolved Solids	3100	40.0	*	mg/L	1	4/18/2014 6:30:00 PM	12772

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 1404805

Date Reported: 4/24/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Florance #100

Diagg Engineering

Lab ID: 1404805-002

**Project:** 

Client Sample ID: MW #2

Collection Date: 4/16/2014 10:25:00 AM

Matrix: AQUEOUS Received Date: 4/17/2014 10:10:00 AM

Analyses	Result	RL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	1.0		μg/L	1	4/18/2014 12:19:01 AM	R18059
Toluene	ND	1.0		μg/L	1	4/18/2014 12:19:01 AM	R18059
Ethylbenzene	ND	1.0		μg/L	1	4/18/2014 12:19:01 AM	R18059
Xylenes, Total	ND	2.0		µg/L	1	4/18/2014 12:19:01 AM	R18059
Surr: 4-Bromofluorobenzene	90.3	82.9-139		%REC	1	4/18/2014 12:19:01 AM	R18059
EPA METHOD 300.0: ANIONS						Analyst	JRR
Fluoride	0.87	0.50		mg/L	5	4/17/2014 2:10:52 PM	R18079
Chloride	6.3	2.5		mg/L	5	4/17/2014 2:10:52 PM	R18079
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	4/17/2014 2:10:52 PM	R18079
Sulfate	2500	50	*	mg/L	100	4/18/2014 5:49:20 PM	R18097
EPA METHOD 200.7: METALS						Analyst	JLF
Iron	1.1	0.10	*	mg/L	5	4/22/2014 12:23:09 PM	12794
SM2540C MOD: TOTAL DISSOLVED SOI	LIDS					Analyst	KS
Total Dissolved Solids	4000	40.0	*	mg/L	1	4/18/2014 6:30:00 PM	12772

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

Lab Order 1404805

Date Reported: 4/24/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Matrix: AQUEOUS

Client Sample ID: MW #3

Florance #100 **Project:** 1404805-003

Lab ID:

Collection Date: 4/16/2014 11:30:00 AM Received Date: 4/17/2014 10:10:00 AM

	11200011110		2.00			
Analyses	Result	RL Q	ual Uni	ts DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analyst:	RAA
Benzene	ND	1.0	μg/	L 1	4/18/2014 12:49:11 AM	R18059
Toluene	ND	1.0	μg/l	_ 1	4/18/2014 12:49:11 AM	R18059
Ethylbenzene	ND	1.0	μg/l	_ 1	4/18/2014 12:49:11 AM	R18059
Xylenes, Total	ND	2.0	μg/l	_ 1	4/18/2014 12:49:11 AM	R18059
Surr: 4-Bromofluorobenzene	90.5	82.9-139	%R	EC 1	4/18/2014 12:49:11 AM	R18059
EPA METHOD 300.0: ANIONS					Analyst:	JRR
Fluoride	0.60	0.50	mg	L 5	4/17/2014 2:35:42 PM	R18079
Chloride	24	2.5	mg	L 5	4/17/2014 2:35:42 PM	R18079
Nitrogen, Nitrate (As N)	ND	0.50	mg	L 5	4/17/2014 2:35:42 PM	R18079
Sulfate	1700	25	* mg/	L 50	4/18/2014 6:01:44 PM	R18097
EPA METHOD 200.7: METALS					Analyst:	JLF
Iron	0.30	0.020	* mg/	L 1	4/22/2014 12:26:42 PM	12794
SM2540C MOD: TOTAL DISSOLVED S	OLIDS				Analyst:	KS
Total Dissolved Solids	2960	40.0	* mg/	'L 1	4/18/2014 6:30:00 PM	12772

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
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- 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 6

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

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1404805

24-Apr-14

Client:

Blagg Engineering

Project:

Florance #100

Sample ID MB-12794

SampType: MBLK

TestCode: EPA Method 200.7: Metals

Client ID:

PBW

LCSW

Batch ID: 12794

RunNo: 18147

Prep Date:

4/21/2014

Analysis Date: 4/22/2014

SegNo: 523601

Units: mg/L

HighLimit

Iron

Analyte

Client ID:

Result

PQL ND 0.020 SPK value SPK Ref Val

%REC LowLimit

TestCode: EPA Method 200.7: Metals

%RPD

**RPDLimit** 

Qual

Sample ID LCS-12794

SampType: LCS Batch ID: 12794

RunNo: 18147

Prep Date: 4/21/2014

Analysis Date: 4/22/2014

SeqNo: 523602

Units: mg/L

Analyte

SPK value SPK Ref Val PQL

0

HighLimit

%RPD **RPDLimit**  Qual

0.5000

0.53

106

Iron

85

LowLimit

115

0.020

%REC

Qualifiers:

R

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J 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 H

Not Detected at the Reporting Limit ND

Reporting Detection Limit

P Sample pH greater than 2.

Page 4 of 6

## Hall Environmental Analysis Laboratory, Inc.

Analysis Date: 4/18/2014

PQL

0.50

Result

ND

WO#: 1404805

24-Apr-14

Client: Project:

Prep Date:

Analyte

Sulfate

Blagg Engineering

Florance #100

Sample ID MB	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: PBW	Batch	n ID: <b>R1</b>	8079	F	RunNo: 1	8079				
Prep Date:	Analysis D	ate: 4/	17/2014	S	SeqNo: 5	21839	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						1		
Sample ID LCS	SampType: LCS TestCode: EPA Method 300.0: Anions									
Client ID: LCSW	Batch	n ID: R1	8079	F	RunNo: 1	8079				
Prep Date:	Analysis D	ate: 4/	17/2014	S	SeqNo: 5	21840	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.7	90	110			
Chloride	4.6	0.50	5.000	0	92.6	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.2	90	110			
Sample ID MB	SampT	уре: МЕ	BLK	TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch	n ID: <b>R1</b>	8097	F	RunNo: 1	8097				

Sample ID LCS	SampT	SampType: LCS			tCode: El	PA Method	6				
Client ID: LCSW	Batch	ID: R1	8097	F	RunNo: 1	8097					
Prep Date:	Analysis D	ate: 4/	18/2014	8	SeqNo: 5	22466	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Sulfate	10	0.50	10.00	0	101	90	110				

SPK value SPK Ref Val

SeqNo: 522465

%REC

LowLimit

Units: mg/L

HighLimit

#### 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 6

**RPDLimit** 

Qual

%RPD

## Hall Environmental Analysis Laboratory, Inc.

20

20

63

18

1.0

1.0

2.0

20.00

20.00

60.00

20.00

WO#:

1404805 24-Apr-14

Client:

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

Blagg Engineering

Project:

Florance #100

Sample ID 5ML-RB2	SampTy	/pe: <b>ME</b>	BLK	Test	Code: El	PA Method	8021B: Volat	iles		
Client ID: PBW	Batch	ID: <b>R1</b>	8059	R	unNo: 1	8059				
Prep Date:	Analysis Da	ate: 4/	17/2014	S	eqNo: 5	21759	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	18		20.00		91.1	82.9	139			
Sample ID 100NG BTEX LCS	SampTy	/pe: LC	S	Test	Code: El	PA Method	8021B: Volat	les		
Client ID: LCSW	Batch	ID: <b>R1</b>	8059	R	unNo: 1	8059				
Prep Date:	Analysis Da	ate: 4/	17/2014	S	eqNo: 5	21760	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	80	120			

0

0

0

102

102

104

91.0

80

80

80

82.9

120

120

120

139

#### 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



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

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

# Sample Log-In Check List

Client Name: BLAGG Work Orde	er Number: 1404805		RcptNo: 1
Received by/date: 461 04 F	114		
ų,	2:10:00 AM	Michelle Con	,,,)
	t	Michelle Gan	· ·
Completed By: Michelle Garcia 4/17/2014 10	0:34:43 AM	Tr punite Gan	ue>
Reviewed By:	1119		
Chain of Custody			
1. Custody seals intact on sample bottles?	Yes 🗌	No L	Not Present 🗹
2. Is Chain of Custody complete?	Yes 🗹	No L	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	3.0°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 🗸	H-f
			# of preserved bottles checked
12.Does paperwork match bottle labels?	Yes 🗹	No 📙	for pH: (<2)or >12 unless noted)
(Note discrepancies on chain of custody)  13. Are matrices correctly identified on Chain of Custody?	Yes 🗸	No □	Adjusted? No.
14. Is it clear what analyses were requested?	Yes ✓	No 🗆	
15. Were all holding times able to be met?	Yes 🗸	No 🗆	Checked by: 05
(If no, notify customer for authorization.)	165 🖭		
Outside the second second second			
Special Handling (if applicable)			[4]
16. Was client notified of all discrepancies with this order?	Yes 🗆	No U	NA 🗹
Person Notified:	Date:		1
By Whom:	Via: eMail	Phone Fax	☐ In Person
Regarding:			
Client Instructions:			i
17. Additional remarks:			
18. Cooler Information			
Cooler No   Temp °C   Condition   Seal Intact   S   1   1.0   Good   Yes	eal No   Seal Date	Signed By	

C	hain-c	of-Cus	stody Record	I di II-Ai odila i	iiiie.					1	AF	П	F	NV	/TI	20	MI	ME	N.	ТΔ	1
Client:	BLAG	G ENGR.	/ BP AMERICA		Rush			-	F									)R/			
				Project Name:			4	K.		-							.con				
Mailing A	ddress:	P.O. BO	X 87	F	LORANCE #	100		10	01 L	law!								3710	0		
			FIELD, NM 87413	Project #:												70			3		
				1,				16	1. 50	15-3	45-3	NAME OF	STATE OF THE		CHECK!	ques	-410	1/		400	
Phone #:	and a	(505) 63	2-1199	Project Manag					4				Anai	y 515	Rei	Jues					
email or F				Trioject Manag			18)		=					04							
QA/QC Pa			Level 4 (Full Validation)		NELSON VE	LEZ	8021B	only)	MRO)			(S	901	(F,CI,N <del>O3,NO7,PÓ</del> 2,SO4)			H		-		
Accreditat			and an extension,	Sampler:	NELSON VE	LEZ no	1	(Gas	101	-	-	8270SIMS)	100	6	ds	(pa.	+				nple
□ NELAP		□ Other		On Ice:	Yes Yes	□ No	1	ТРН (	IQ/	118.	504.	3270		F	Solids	ilte	1				e sal
□ EDD (1	Гуре)			Sample Tempe	erature:	.0	1	E+1	(GRO	od 4	od 5	or 8	Metals	¥.	lved	us (f	#			ā	osite
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX +-NAT	BTEX + MTB	TPH 8015B	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or	RCRA 8 Me	Anions (F,C	Total Dissolved	Iron, Ferrous (filtered)	Nitrate N /			Grab sample	5 pt. composite sample
4/16/14	0920	WATER	MW#1	40 ml VOA - 2	HCl & Cool	-001	٧													V	
4/16/14	0920	WATER	MW#1	500 ml - 1	Cool	- 001								٧	٧					٧	
4/16/14	0920	WATER	MW#1	125 ml - 1	HNO <sub>3</sub> & Cool	- 001										٧				٧	
4/16/14	0920	WATER	MW#1	125 ml - 1	H <sub>2</sub> SO <sub>4</sub> & Cool	-001											٧			٧	
4/16/14	1025	WATER	MW # 2	40 ml VOA - 2	HCl & Cool	-002	٧						,							٧	
4/16/14	1025	WATER	MW # 2	500 ml - 1	Cool	- 002								٧	٧					٧	
4/16/14	1025	WATER	MW # 2	125 ml - 1	HNO <sub>3</sub> & Cool	-002										٧				٧	
4/16/14	1025	WATER	MW#2	125 ml - 1	H₂SO <sub>4</sub> & Cool	-002											٧			٧	
4/16/14	1130	WATER	MW#3	40 ml VOA - 2	HCI & Cool	-003	٧													٧	
4/16/14	1130	WATER	MW#3	500 ml - 1	Cool	-003								٧	٧					٧	
4/16/14	1130	WATER	MW#3	125 ml - 1	HNO <sub>3</sub> & Cool	-003										٧				٧	
4/16/14	1130	WATER	MW#3	125 ml - 1	H <sub>2</sub> SO <sub>4</sub> & Cool	-003											٧			٧	
Date: 14	Time:	Relinquishe	in of	Received by:	Moelo	Date Time 4/14/14 1505 Date Time		nark		e to	Bla		ngin		ng, Ir	nc.					
4/16/14	IT ID	ary, satiples s	With Walls ubmitted to Hall Environmental may be s	white to other	accredited laboratore	S 10:10 s. Tris serves as notice of	this p	ossibii	ity. Ar	ny sub	Blo	omf	field,	NM			led on	the an	alytica	al repo	rt.

Soil ING

District I
Pic25 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 8750

## 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	ncis Dr., Sant	a Fe, NM 87505	5	Sa	anta F	Fe, NM 875	05					
			Rele	ease Notific	catio	n and Co	rrective A	ction				
						<b>OPERA</b>	ГOR		Initi	al Report	$\boxtimes$	Final Report
Name of Co	ompany: B	P				Contact: Jef	f Peace					
		Court, Farmi	ington, N	M 87401			No.: 505-326-94					
Facility Na	me: Floran	ce 100				Facility Typ	e: Natural gas v	well				
Surface Ow	vner: Feder	al		Mineral (	Owner	: Federal			API No	. 30045200	064	
				LOCA	ATIO	N OF REI	LEASE					
Unit Letter	Section	Township	Range	Feet from the		h/South Line	Feet from the	East/W	est Line	County: S	an Juan	1
P	30	30N	8W	1,170	Sout	h	945	East				
		Y -4	:4-1- 2	( 77927		I	107.71020					
		Lat	itude3	6.77837			<b>e</b> 107.71039_					
m on t					ruri	E OF REL						
		nsate/oil – hist nown – likely o					Release: unknow Hour of Occurrence			Recovered: 1		: 9/26/2013;
Source of Re	cicase. unkn	own – likely c	earmen pit			unknown	iour of Occurrenc		1:00 PM	Hour of Dis	covery.	. 9/20/2013,
Was Immedi	iate Notice (			la Marin		If YES, To	Whom?					
			Yes L	No Not R	equirec							
By Whom? Was a Water	raquesa Dag	ahad?				Date and H	lour: olume Impacting t	the Water	POOLIFCO			
was a water	icourse Rea		Yes 🗵	No		II TES, VC	nume impacting	ille water	course.	RCUD F	EP 1	2117
If a Waterco	urse was Im	pacted, Descr	ibe Fully.	k						OIL GO		
		,									ST. 3	
										W 10	The second	
							d during contouri					
							epth and lateral ex nt. Clean soil was					
of soil was ta			loved and	natiled to the IEI	landia	rm for treatmen	it. Clean soil was	s used to	Dackiiii ui	ie excavatioi	n. 3,008	cubic yards
Describe Are	ea Affected	and Cleanup	Action Tal	cen *Impacted so	il was o	excavated and	removed. Approx	ximately	3.608 cub	ic vards of i	mpacted	d soil was
taken to IEI	landfarm fo	r treatment. E	Excavated				ince excavation de					
wells will be	installed to	check water	quality.									
							knowledge and u					
							nd perform correct parked as "Final R					
should their	operations h	nave failed to	adequately	investigate and	remedia	ate contaminati	ion that pose a thr	reat to gro	ound wate	r, surface wa	ater, hu	man health
		addition, NM( ws and/or reg		otance of a C-141	report	does not reliev	e the operator of	responsil	oility for c	compliance v	with any	other
icuciai, state	o, or local la	ws and/or reg	diations.				OIL CON	SERV	ATION	DIVISIO	ON	
G:	alk	Dano							\ /	1 .	. 1	
Signature:	XIV	gaet				A	F	·	X		V	
Printed Nam	e: Jeff Peac	e				Approved by	Environmental S	peciansi		X	1	à
Title: Field I	Environmen	tal Advisor				Approval Da	te:	E	Expiration	Date:		
E-mail Addr	ress: peace.j	effrey@bp.co	m			Conditions o	\	_		Attached	1 🗌	
Date: Febru				e: 505-326-9479		Invest	GLAT U	Incom	abelga			
* Attach Add	itional She	ets If Necess	sary			Addition	STATE (A	Reco	1	0	(	
							- chate	· Equ	NOVER		7).	

## **BP AMERICA PRODUCTION COMPANY**

# FLORANCE 100 – HISTORICAL (LEGACY) RELEASE CLEANUP API #: 30-045-20064

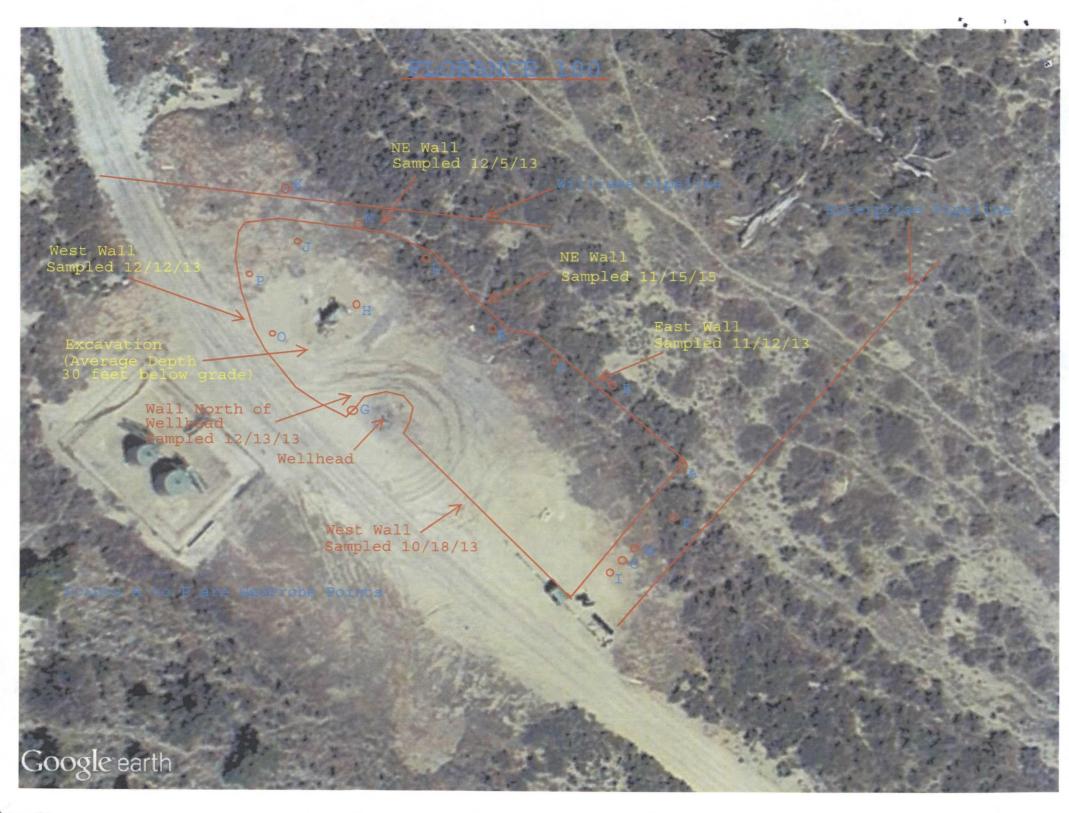
Legal Description: (Unit Letter P, Sec. 30 - T30N - R8W, NMPM)

## CHRONOLOGICAL EVENT SUMMATION

- 1. September 26, 2013: Soil impacts discovered (74' South 68° East of PxA Marker) with dozer while recontouring site for final PxA operations. Original source event not evident and local pipeline operators (Enterprise and Williams) contacted to determine if they might be owners. Pipeline operators indicated they had no record of waste discharges in the impact area. BP initiates plan for cleanup effort.
- 2. September 27, 2013: BP begins remediation by excavation with trackhoe.

4, 6

- 3. October 17, 2013: Conduct GeoProbe investigation to determine extent of impacts in areas of live pipelines.
- 4. November 15-19, 2013: Additional GeoProbe investigation to further delineate extent of impacts. Second potential impact area discovered with GeoProbe at 47' North 16.5° East of PxA marker. Original source event could not be determined.
- 5. December 13, 2013: Complete excavation of impacts. Total of 3,608 cubic yards of soil removed and transported to BP Crouch Mesa Landfarm in San Juan County, NM for final remediation.





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

OrderNo.: 1310948

October 25, 2013

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413

TEL: (505) 320-1183 FAX (505) 632-3903

RE: FLORANCE 100

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 7 sample(s) on 10/19/2013 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Only

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1310948

Date Reported: 10/25/2013

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: 42' S42E @ -26'

**Project:** FLORANCE 100

Collection Date: 10/16/2013 3:20:00 PM

Lab ID: 1310948-001

Matrix: SOIL

Received Date: 10/19/2013 11:00:00 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	10/22/2013 1:38:42 PM	9920
Surr: DNOP	97.2	66-131	%REC	1	10/22/2013 1:38:42 PM	9920
EPA METHOD 300.0: ANIONS					Analyst	JRR
Chloride	ND	30	mg/Kg	20	10/21/2013 1:29:46 PM	9931
EPA METHOD 8260B: VOLATILES SI	HORT LIST				Analyst	RAA
Benzene	ND	0.048	mg/Kg	1	10/22/2013 8:06:18 PM	9929
Toluene	ND	0.048	mg/Kg	1	10/22/2013 8:06:18 PM	9929
Ethylbenzene	ND	0.048	mg/Kg	1	10/22/2013 8:06:18 PM	9929
Xylenes, Total	ND	0.096	mg/Kg	1	10/22/2013 8:06:18 PM	9929
Surr: 1,2-Dichloroethane-d4	99.3	70-130	%REC	1	10/22/2013 8:06:18 PM	9929
Surr: 4-Bromofluorobenzene	96.1	70-130	%REC	1	10/22/2013 8:06:18 PM	9929
Surr: Dibromofluoromethane	107	70-130	%REC	1	10/22/2013 8:06:18 PM	9929
Surr: Toluene-d8	88.9	70-130	%REC	1	10/22/2013 8:06:18 PM	9929
EPA METHOD 8015D MOD: GASOLIN	NE RANGE				Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	10/22/2013 8:06:18 PM	9929
Surr: BFB	96.1	70-130	%REC	1	10/22/2013 8:06:18 PM	9929

Sample Collected at base of excavation SW of wellhead

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

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- 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 Not Detected at the Reporting Limit Page 1 of 12 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

## Lab Order 1310948

Date Reported: 10/25/2013

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: W SIDEWALL 5-pt @ 10'-20'

Project: FLORANCE 100

Collection Date: 10/18/2013 9:32:00 AM

Lab ID:

1310948-002

Matrix: SOIL

Received Date: 10/19/2013 11:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGI	E ORGANICS				Analyst:	BCN
Diesel Range Organics (DRO)	32	9.9	mg/Kg	1	10/22/2013 2:00:37 PM	9920
Surr: DNOP	96.2	66-131	%REC	1	10/22/2013 2:00:37 PM	9920
EPA METHOD 300.0: ANIONS					Analyst:	JRR
Chloride	110	30	mg/Kg	20	10/21/2013 1:42:11 PM	9931
EPA METHOD 8260B: VOLATILES SH	IORT LIST				Analyst:	RAA
Benzene	ND	0.048	mg/Kg	1	10/22/2013 9:32:14 PM	9929
Toluene	ND	0.048	mg/Kg	1	10/22/2013 9:32:14 PM	9929
Ethylbenzene	ND	0.048	mg/Kg	1	10/22/2013 9:32:14 PM	9929
Xylenes, Total	ND	0.097	mg/Kg	1	10/22/2013 9:32:14 PM	9929
Surr: 1,2-Dichloroethane-d4	96.6	70-130	%REC	1	10/22/2013 9:32:14 PM	9929
Surr: 4-Bromofluorobenzene	94.7	70-130	%REC	1	10/22/2013 9:32:14 PM	9929
Surr: Dibromofluoromethane	103	70-130	%REC	1	10/22/2013 9:32:14 PM	9929
Surr: Toluene-d8	85.2	70-130	%REC	1	10/22/2013 9:32:14 PM	9929
EPA METHOD 8015D MOD: GASOLIN	E RANGE				Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	10/22/2013 9:32:14 PM	9929
Surr: BFB	94.7	70-130	%REC	1	10/22/2013 9:32:14 PM	9929

Sample collected along SW sidewall, south of wellhead.

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

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- 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 for VOA and TOC only.
- Reporting Detection Limit

### Lab Order 1310948

Hall Environmental Analysis Laboratory, Inc. Date Reported: 10/25/2013

**CLIENT:** Blagg Engineering

Client Sample ID: GP-A @ 20'

Project: FLORANCE 100

Collection Date: 10/17/2013 10:26:00 AM

Lab ID: 1310948-003

Matrix: SOIL Received Date: 10/19/2013 11:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	10/22/2013 2:44:40 PM	9920
Surr: DNOP	93.8	66-131	%REC	1	10/22/2013 2:44:40 PM	9920
EPA METHOD 300.0: ANIONS					Analyst	JRR
Chloride	ND	30	mg/Kg	20	10/21/2013 1:54:36 PM	9931
EPA METHOD 8260B: VOLATILES S	SHORT LIST				Analyst	RAA
Benzene	ND	0.046	mg/Kg	1	10/23/2013 1:21:26 AM	9929
Toluene	ND	0.046	mg/Kg	1	10/23/2013 1:21:26 AM	9929
Ethylbenzene	ND	0.046	mg/Kg	1	10/23/2013 1:21:26 AM	9929
Xylenes, Total	ND	0.092	mg/Kg	1	10/23/2013 1:21:26 AM	9929
Surr: 1,2-Dichloroethane-d4	104	70-130	%REC	1	10/23/2013 1:21:26 AM	9929
Surr: 4-Bromofluorobenzene	96.5	70-130	%REC	1	10/23/2013 1:21:26 AM	9929
Surr: Dibromofluoromethane	111	70-130	%REC	1	10/23/2013 1:21:26 AM	9929
Surr: Toluene-d8	94.5	70-130	%REC	1	10/23/2013 1:21:26 AM	9929
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	10/23/2013 1:21:26 AM	9929
Surr: BFB	96.5	70-130	%REC	1	10/23/2013 1:21:26 AM	9929

GeoProbe Point A at 20' depth

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

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- 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
- Not Detected at the Reporting Limit Page 3 of 12 Sample pH greater than 2 for VOA and TOC only. P
- RL Reporting Detection Limit

Lab Order 1310948

Date Reported: 10/25/2013

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: GP-B @ 18'

Project: FLORANCE 100

Collection Date: 10/17/2013 12:42:00 PM

**Lab ID:** 1310948-004

Matrix: SOIL

Received Date: 10/19/2013 11:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	10/22/2013 3:06:41 PM	9920
Surr: DNOP	93.8	66-131	%REC	1	10/22/2013 3:06:41 PM	9920
EPA METHOD 300.0: ANIONS					Analyst:	JRR
Chloride	ND	30	mg/Kg	20	10/21/2013 2:07:00 PM	9931
EPA METHOD 8260B: VOLATILES \$	SHORT LIST				Analyst	RAA
Benzene	ND	0.049	mg/Kg	1	10/23/2013 1:50:02 AM	9929
Toluene	ND	0.049	mg/Kg	1	10/23/2013 1:50:02 AM	9929
Ethylbenzene	ND	0.049	mg/Kg	1	10/23/2013 1:50:02 AM	9929
Xylenes, Total	ND	0.098	mg/Kg	1	10/23/2013 1:50:02 AM	9929
Surr: 1,2-Dichloroethane-d4	102	70-130	%REC	1	10/23/2013 1:50:02 AM	9929
Surr: 4-Bromofluorobenzene	93.9	70-130	%REC	1	10/23/2013 1:50:02 AM	9929
Surr: Dibromofluoromethane	106	70-130	%REC	1	10/23/2013 1:50:02 AM	9929
Surr: Toluene-d8	86.8	70-130	%REC	1	10/23/2013 1:50:02 AM	9929
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	10/23/2013 1:50:02 AM	9929
Surr: BFB	93.9	70-130	%REC	1	10/23/2013 1:50:02 AM	9929

GeoProbe Point B at 18' depth

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 12

- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1310948

Date Reported: 10/25/2013

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: GP-D @ 23'

Project: FLORANCE 100

Collection Date: 10/18/2013 10:02:00 AM

1310948-005 Lab ID:

Received Date: 10/19/2013 11:00:00 AM Matrix: SOIL

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	710	10	mg/Kg	1	10/22/2013 3:28:42 PM	9920
Surr: DNOP	115	66-131	%REC	1	10/22/2013 3:28:42 PM	9920
EPA METHOD 300.0: ANIONS					Analyst	JRR
Chloride	ND	30	mg/Kg	20	10/21/2013 2:19:25 PM	9931
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	cadg
Benzene	ND	0.047	mg/Kg	1	10/23/2013 6:35:52 PM	9929
Toluene	ND	0.047	mg/Kg	1	10/23/2013 6:35:52 PM	9929
Ethylbenzene	ND	0.047	mg/Kg	1	10/23/2013 6:35:52 PM	9929
Xylenes, Total	ND	0.095	mg/Kg	- 1	10/23/2013 6:35:52 PM	9929
Surr: 1,2-Dichloroethane-d4	114	70-130	%REC	1	10/23/2013 6:35:52 PM	9929
Surr: 4-Bromofluorobenzene	106	70-130	%REC	1	10/23/2013 6:35:52 PM	9929
Surr: Dibromofluoromethane	113	70-130	%REC	1	10/23/2013 6:35:52 PM	9929
Surr: Toluene-d8	95.6	70-130	%REC	1	10/23/2013 6:35:52 PM	9929
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	cadg
Gasoline Range Organics (GRO)	77	4.7	mg/Kg	1	10/23/2013 6:35:52 PM	9929
Surr: BFB	106	70-130	%REC	1	10/23/2013 6:35:52 PM	9929

GeoProbe Point D at 23 foot depth. Subsequently excavated.

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

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Not Detected at the Reporting Limit Page 5 of 12 Sample pH greater than 2 for VOA and TOC only.
- P
- RL Reporting Detection Limit

#### Lab Order 1310948

Date Reported: 10/25/2013

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: GP-E @ 24'

Project: FLORANCE 100

Collection Date: 10/18/2013 11:14:00 AM

1310948-006 Lab ID:

Matrix: SOIL

Received Date: 10/19/2013 11:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	310	10	mg/Kg	1	10/22/2013 3:50:45 PM	9920
Surr: DNOP	101	66-131	%REC	1	10/22/2013 3:50:45 PM	9920
EPA METHOD 300.0: ANIONS					Analyst	JRR
Chloride	ND	30	mg/Kg	20	10/21/2013 2:31:50 PM	9931
EPA METHOD 8260B: VOLATILES SHO	ORT LIST				Analyst	RAA
Benzene	ND	0.047	mg/Kg	1	10/23/2013 2:47:12 AM	9929
Toluene	ND	0.047	mg/Kg	1	10/23/2013 2:47:12 AM	9929
Ethylbenzene	ND	0.047	mg/Kg	1	10/23/2013 2:47:12 AM	9929
Xylenes, Total	ND	0.094	mg/Kg	1	10/23/2013 2:47:12 AM	9929
Surr: 1,2-Dichloroethane-d4	105	70-130	%REC	1	10/23/2013 2:47:12 AM	9929
Surr: 4-Bromofluorobenzene	89.0	70-130	%REC	1	10/23/2013 2:47:12 AM	9929
Surr: Dibromofluoromethane	106	70-130	%REC	1	10/23/2013 2:47:12 AM	9929
Surr: Toluene-d8	94.5	70-130	%REC	1	10/23/2013 2:47:12 AM	9929
EPA METHOD 8015D MOD: GASOLINE	RANGE				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	10/23/2013 2:47:12 AM	9929
Surr: BFB	89.0	70-130	%REC	1	10/23/2013 2:47:12 AM	9929

GeoProbe Point E at 24 foot depth. Subsequently Excavated.

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

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

- Not Detected at the Reporting Limit Page 6 of 12 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

#### Lab Order 1310948

Date Reported: 10/25/2013

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: GP-F @ 20'

**Project:** FLORANCE 100

Collection Date: 10/18/2013 12:17:00 PM

Lab ID: 1310948-007

Matrix: SOIL

Received Date: 10/19/2013 11:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	10/22/2013 4:12:45 PM	9920
Surr: DNOP	97.4	66-131	%REC	1	10/22/2013 4:12:45 PM	9920
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Chloride	ND	30	mg/Kg	20	10/21/2013 2:44:15 PM	9931
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	RAA
Benzene	ND	0.047	mg/Kg	1	10/23/2013 3:15:46 AM	9929
Toluene	ND	0.047	mg/Kg	1	10/23/2013 3:15:46 AM	9929
Ethylbenzene	ND	0.047	mg/Kg	1	10/23/2013 3:15:46 AM	9929
Xylenes, Total	ND	0.095	mg/Kg	1	10/23/2013 3:15:46 AM	9929
Surr: 1,2-Dichloroethane-d4	100	70-130	%REC	1	10/23/2013 3:15:46 AM	9929
Surr: 4-Bromofluorobenzene	98.0	70-130	%REC	1	10/23/2013 3:15:46 AM	9929
Surr: Dibromofluoromethane	101	70-130	%REC	1	10/23/2013 3:15:46 AM	9929
Surr: Toluene-d8	88.9	70-130	%REC	1	10/23/2013 3:15:46 AM	9929
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	10/23/2013 3:15:46 AM	9929
Surr: BFB	98.0	70-130	%REC	1	10/23/2013 3:15:46 AM	9929

GeoProbe Point F at 20 foot Depth. Located between south edge of location and Enterprise pipeline. Hit Sandstone at 20' depth

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

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Not Detected at the Reporting Limit Page 7 of 12 Sample pH greater than 2 for VOA and TOC only.
- P
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1310948

25-Oct-13

Client:

Blagg Engineering

Project:

FLORANCE 100

Sample ID MB-9931

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID: PBS

Batch ID: 9931

PQL

RunNo: 14237

Prep Date: 10/21/2013 Analysis Date: 10/21/2013

SeqNo: 407870

Units: mg/Kg

Qual

Analyte Chloride

Result

1.5

SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** 

ND

TestCode: EPA Method 300.0: Anions

Client ID: LCSS

SampType: LCS Batch ID: 9931

PQL

1.5

RunNo: 14237

10/21/2013 Prep Date:

Sample ID LCS-9931

Analysis Date: 10/21/2013

SeqNo: 407871

Units: mg/Kg

Analyte

SPK value SPK Ref Val %REC LowLimit

**RPDLimit** Qual

Result

15.00

95.9

HighLimit %RPD

Chloride

14

Qualifiers:

Value exceeds Maximum Contaminant Level.

Value above quantitation range E

Analyte detected below quantitation limits J

RSD is greater than RSDlimit 0

RPD outside accepted recovery limits R

Spike Recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded H

ND Not Detected at the Reporting Limit Sample pH greater than 2 for VOA and TOC only. Page 8 of 12

Reporting Detection Limit RL

P

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1310948

25-Oct-13

Client:

Blagg Engineering

Project:

FLORANCE 100

Sample ID MB-9920	SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics								
Client ID: PBS	Batch ID: 9920	Batch ID: 9920 RunNo: 14215							
Prep Date: 10/21/2013	Analysis Date: 10/2	21/2013	SeqNo: 407543 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	10	10.00		103	66	131			
Sample ID LCS-9920	SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 9920	)	R	unNo: 14	4215				
Prep Date: 10/21/2013	Analysis Date: 10/2	21/2013	S	eqNo: 40	07544	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47 10	50.00	0	93.2	77.1	128			
Surr: DNOP	4.8	5.000		96.0	66	131			

#### 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
  - Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 9 of 12

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1310948

25-Oct-13

Client:

Blagg Engineering

Project:

FLORANCE 100

Project: FLORA	INCE 100									
Sample ID mb-9929	SampType: MBLK TestCode: EPA Method 8260B: Volatiles Short List									
Client ID: PBS	Batch	ID: 992	29	R	RunNo: 1	4255				
Prep Date: 10/21/2013	Analysis Da	ate: 10	/22/2013	S	SeqNo: 4	09097	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: 1,2-Dichloroethane-d4	0.52		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		111	70	130			
Surr: Toluene-d8	0.47		0.5000		94.7	70	130			
Sample ID mb-9929	SampType: MBLK TestCode: EPA Method 8260B: Volatiles Short List									
Client ID: PBS	Batch ID: 9929			F	RunNo: 1	4255				
Prep Date: 10/21/2013	Analysis Da	ate: 10	/22/2013	S	SeqNo: 4	09512	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: 1,2-Dichloroethane-d4	0.52		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		111	70	130			
Surr: Toluene-d8	0.47		0.5000		94.7	70	130			
Sample ID LCS-9929	SampTy	/pe: LC	S	Tes	tCode: EI	PA Method	8260B: Vola	tiles Short	List	
Client ID: LCSS	Batch	ID: 992	29	F	RunNo: 1	4255				
Prep Date: 10/21/2013	Analysis Da	ate: 10	/22/2013	S	SeqNo: 4	09534	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	109	70	130			
Toluene	1.0	0.050	1.000	0	99.8	69.9	139			
Ethylbenzene	1.0	0.050	1.000	0	104	70	130			
Xylenes, Total	3.2	0.10	3.000	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		105	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.4	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.48		0.5000		95.2	70	130			

#### 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
  - Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

P

Page 10 of 12

## Hall Environmental Analysis Laboratory, Inc.

Result

0.53

0.48

0.55

0.45

PQL

WO#:

1310948

25-Oct-13

Client:

Blagg Engineering

Project:

Analyte

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Surr: Toluene-d8

FLORANCE 100

Sample ID mb-9907	SampType: MBLK TestCode: EPA Method				8260B: Volat	tiles Short	List		
Client ID: PBS	Batch ID: F	R14280	R	lunNo: 14	1280				
Prep Date:	Analysis Date:	10/23/2013	S	eqNo: 41	10558	Units: %RE	С		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.49	0.5000		97.2	70	130			
Surr: 4-Bromofluorobenzene	0.46	0.5000		91.1	70	130			
Surr: Dibromofluoromethane	0.53	0.5000		107	70	130			
Surr: Toluene-d8	0.44	0.5000		88.1	70	130			
Sample ID LCS-9907	SampType: L	.cs	Tes	tCode: EF	A Method	8260B: Volat	tiles Short	List	
Client ID: LCSS	Batch ID: F	R14280	R	RunNo: 14	1280				
Prep Date:	Analysis Date:	10/23/2013	S	egNo: 41	10563	Units: %RE	С		

%REC

106

96.6

110

89.7

LowLimit

70

70

70

70

HighLimit

130

130

130

130

%RPD

**RPDLimit** 

Qual

SPK value SPK Ref Val

0.5000

0.5000

0.5000

0.5000

#### 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 for VOA and TOC only.
- RL Reporting Detection Limit

Page 11 of 12

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1310948

25-Oct-13

Client:

Blagg Engineering

Project:

FLORANCE 100

Project: FLORA	NCE 100								
Sample ID mb-9929	SampType: MB	LK	Test	Code: EF	PA Method	8015D Mod:	Gasoline	Range	
Client ID: PBS	Batch ID: 992	29	R	RunNo: 14	1255				
Prep Date: 10/21/2013	Analysis Date: 10	/22/2013	S	eqNo: 40	09104	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	510	500.0		102	70	130			
Sample ID mb-9929	SampType: MBLK TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 992	29	F	RunNo: 14	1255				
Prep Date: 10/21/2013	Analysis Date: 10	/22/2013	S	SeqNo: 40	09535	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	510	500.0		102	70	130			
Sample ID LCS-9929	SampType: LC	S	Tes	tCode: EF	PA Method	8015D Mod:	Gasoline	Range	
Client ID: LCSS	Batch ID: 992	29	F	RunNo: 14	4255				
Prep Date: 10/21/2013	Analysis Date: 10	/22/2013	S	SeqNo: 40	09536	Units: mg/k	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24 5.0	25.00	0	94.1	80	120			
Surr: BFB	450	500.0		90.2	70	130			

#### 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 12 of 12

- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

# Sample Log-In Check List

Client Name: BLAGG	Work Order Number	RcptNo: 1								
Received by/date:	10/19/13	·	3							
Logged By: Andy Freeman	10/19/2013 11:00:00	AM	andyl							
Completed By: Anne Thorne	10/21/2013		and I'm							
Reviewed By:	20/21/2		Cine Jim							
Chain of Custody	10/04/12			**						
Custody seals intact on sample bot	tles?	Yes	No 🗆	Not Present ✓						
2. Is Chain of Custody complete?		Yes 🗸	No 🗌	Not Present						
3. How was the sample delivered?		Courier								
Log In										
4. Was an attempt made to cool the	samples?	Yes 🗸	No 🗌	NA 🗌						
5. Were all samples received at a ten	nperature of >0° C to 6.0°C	Yes 🗸	No 🗌	NA 🗆						
6. Sample(s) in proper container(s)?		Yes 🗸	No 🗌							
7. Sufficient sample volume for indica	ted test(s)?	Yes 🗹	No 🗌							
8. Are samples (except VOA and ON	G) 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 recei	ved broken?	Yes	No 🗸							
				# of preserved bottles checked						
12. Does paperwork match bottle label		Yes 🗸	No 🗆	for pH:	>12 unless noted)					
(Note discrepancies on chain of cu		Yes 🗸	No 🗌	Adjusted?	>12 unless noted)					
<ul><li>13. Are matrices correctly identified on</li><li>14. Is it clear what analyses were required.</li></ul>		Yes 🗸	No 🗆	_						
15. Were all holding times able to be n		Yes 🗸	No 🗆	Checked by:						
(If no, notify customer for authoriza	tion.)		I	-						
Special Handling (if applicable	_									
16. Was client notified of all discrepant	cies with this order?	Yes	No 🗆	NA 🗸	1					
Person Notified:	Date	marks at a Marks Mark on MM Land on	AND PROPERTY.							
By Whom:	Via:	eMail	Phone Fax	In Person						
Regarding:	sale (Philadeles Menore and acceptable) of the second decision of control of the second		of some fit, and it was varied a set of							
Client Instructions:										
17. Additional remarks:										
18. Cooler Information	ostaningamenta a disense il	o _n ,e goo en	gran <u>ag</u> amaya <u>l</u> na i 1							
Cooler No Temp °C Cond  1 4.0 Good	tion   Seal Intact   Seal No   Yes	Seal Date	Signed By							
1 4.0 3000	163									

C	hain-	of-Cu	stody Record	Turn-Around	Time:	WED. 19/23/13		10			1 .			NIX	TE	20	ni s	A E	NT	ΑI	
Client:	BLAGE	ENGWE	erwo Inc.	☐ Standard	🔀 Rush														TO		,
E	SP AL	AFRICA			CE 100		_				www	v.hal	lenv	ironr	ment	al.co	m				
			ox 87		GE 100	5		49	01 H	awki	ns N	1E -	Alb	uque	erque	e, NI	M 87	109			
			u 87413	Project #:			Tel. 505-345-3975 Fax 505-345-4107  Analysis Request														
		5-632	-1199					<u> </u>				A	naly		Req	uest					
email o				Project Mana	-		3021) as only) /##R©) S) S) CB's														
QA/QC I	_		☐ Level 4 (Full Validation)	J. Bu	466		TATES (8021)	TPH (Gas only)	DRO /#			SIMS)		,PO4,	2 PCB's						
Accredi  □ NEL		□ Othe	r	Sampler: J.	BLAG6 X Yes	□ No	1 THE	+ TPH	-	18.1)	504.1)	8270		3,NO <sub>2</sub>	808/		(F)				or N)
□ EDD	(Type)_			Sample Tem	perature:	420	BE - GG (GF od 50					-	į	2							
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + MT	BTEX + MTBE	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method	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)
1/16/13	1520	SOIL	42 84ZE @ -26	402×1	-001	x		×									×				
118/13		tį	WEST SIDEWALL 5-PT	ü	21	-002	×		×									×			
117/13		il	GPA@ZO'	ie	14	-203	X		X								,	X			
ű	1242	il	GP-BC 18'	и	и	-004	×		×									×			
/18/13	1002	le	GP-De 16 23'	26	2.6	7065	×		×									X			L
34	1114	h	GP-E@ 24'	١٤	11.	-006	×		×									×			
1 i	1217	lı	GP-F@ 20'	it	ė.	707	×		×									×	$\perp$		
<del>- 4</del>										-	$\dashv$							$\dashv$	+	+	$\vdash$
																		$\exists$			_
											$\dashv$	$\dashv$						$\dashv$	+		+
Date: Time: Relinquished by:    1421				Received by:	Whelen	Date Time	Ren	nark	-	AVK			FE	IR	K	9\$3	TS				
9/18/17	1700	AM samples subr	nitted to Hall Environmental may be subc	ontracted to other a	credited laboratorie	18/19/13 11.0c	nneeil	oility 4						Clearly			the er	alution	ronort		_
		V	y 2 2000 a • u • 1 • 1 • 1 • 1 • 1 • 1 • 1 • 1 • 1			The state of the s	,		, 00				20	J.Juli	,	011	2.0 011		. opoli.		



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

OrderNo.: 1311585

November 19, 2013

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

**FAX** 

RE: Florance 100

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/14/2013 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

### Lab Order 1311585

Date Reported: 11/19/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: East Wall 9-point comp. 8' -24'

Project: Florance 100

Collection Date: 11/12/2013 2:50:00 PM

Lab ID: 1311585-001

Matrix: SOIL

Received Date: 11/14/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE O	RGANICS				Analyst:	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/15/2013 12:20:44 PM	1 10337
Surr: DNOP	90.3	66-131	%REC	1	11/15/2013 12:20:44 PM	1 10337
EPA METHOD 8015D: GASOLINE RANG	E				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	11/16/2013 4:07:47 AM	10349
Surr: BFB	94.4	74.5-129	%REC	1	11/16/2013 4:07:47 AM	10349
<b>EPA METHOD 8021B: VOLATILES</b>					Analyst:	NSB
Benzene	ND	0.049	mg/Kg	1	11/16/2013 4:07:47 AM	10349
Toluene	ND	0.049	mg/Kg	1	11/16/2013 4:07:47 AM	10349
Ethylbenzene	ND	0.049	mg/Kg	1	11/16/2013 4:07:47 AM	10349
Xylenes, Total	ND	0.099	mg/Kg	1	11/16/2013 4:07:47 AM	10349
Surr: 4-Bromofluorobenzene	108	80-120	%REC	1	11/16/2013 4:07:47 AM	10349
EPA METHOD 300.0: ANIONS					Analyst:	JRR
Chloride	ND	30	mg/Kg	20	11/15/2013 1:58:02 PM	10359

East Wall, along south end of excavation, sampled to confirm excavation closure.

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

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- 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
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

- Sample pH greater than 2 for VOA and TOC only. P
- RL Reporting Detection Limit

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1311585

19-Nov-13

Client:

Blagg Engineering

Project:

Florance 100

Sample ID MB-10359

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

**PBS** 

Batch ID: 10359

RunNo: 14851

Prep Date: 11/15/2013

Analysis Date: 11/15/2013

SeqNo: 428021

Units: mg/Kg

Analyte

SPK value SPK Ref Val %REC LowLimit HighLimit

%RPD

%RPD

**RPDLimit** Qual

Chloride

ND 1.5

Sample ID LCS-10359

SampType: LCS

Prep Date: 11/15/2013

LCSS

Batch ID: 10359 Analysis Date: 11/15/2013

RunNo: 14851

SegNo: 428022

Units: mg/Kg

Analyte

Client ID:

PQL

SPK value SPK Ref Val %REC

LowLimit

TestCode: EPA Method 300.0: Anions

HighLimit

**RPDLimit** 

Qual

Chloride

Result 14

1.5 15.00 0 95.8 110

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range Analyte detected below quantitation limits
- 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
- H Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- P Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Page 2 of 5

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1311585

19-Nov-13

Client:

Blagg Engineering

Project:

Florance 100

Sample ID LCS-10337	SampType	: LCS	Test	tCode: El	PA Method	8015D: Diese	el Range C	Organics	
Client ID: LCSS	Batch ID	: 10337	R	RunNo: 1	4826				
Prep Date: 11/14/2013	Analysis Date	11/15/2013	S	eqNo: 4	27453	Units: mg/K	(g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10 50.00	0	87.4	62.1	127			
Surr: DNOP	4.4	5.000		87.3	66	131			

Sample ID MB-10337	SampTyp	e: MBLK	Test	Code: El	PA Method	8015D: Diese	el Range (	Organics	
Client ID: PBS	Batch II	D: <b>10337</b>	R	tunNo: 1	4826				
Prep Date: 11/14/2013	Analysis Dat	e: <b>11/15/2013</b>	S	eqNo: 4	27454	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	8.2	10.00		81.6	66	131			

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 for VOA and TOC only.

RL Reporting Detection Limit

Page 3 of 5

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1311585

19-Nov-13

Client:

Blagg Engineering

Project:

Prep Date:

Prep Date:

Florance 100

Sample ID MB-10349 Client ID: **PBS** 

SampType: MBLK

Analysis Date: 11/15/2013

TestCode: EPA Method 8015D: Gasoline Range

Batch ID: 10349 RunNo: 14837

1000

SeqNo: 427700

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

Gasoline Range Organics (GRO) Surr: BFB

11/14/2013

11/14/2013

ND 5.0 900

Units: mg/Kg

129

%RPD

%RPD **RPDLimit** Qual

**RPDLimit** 

Qual

Sample ID LCS-10349 Client ID: LCSS

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

74.5

Batch ID: 10349 Analysis Date: 11/15/2013 RunNo: 14837

89.8

SeqNo: 427707 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit Gasoline Range Organics (GRO) 25 5.0 25.00 99.2 74.5 126 Surr: BFB 980 1000 98.0 74.5 129

#### Qualifiers:

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

Page 4 of 5

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1311585

19-Nov-13

Client:

Blagg Engineering

Project:

Florance 100

Sample ID MB-10349	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batch	n ID: 10	349	R	RunNo: 1	4837				
Prep Date: 11/14/2013	Analysis D	ate: 11	1/15/2013	S	SeqNo: 4	27782	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-10349	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batch	ID: 10	349	F	RunNo: 1	4837				
Prep Date: 11/14/2013	Analysis D	ate: 11	/15/2013	S	SeqNo: 4	27783	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	101	80	120		_	
Toluene	1.0	0.050	1.000	0	104	80	120			
Ethylbenzene	1.1	0.050	1.000	0	105	80	120			
Xylenes, Total	3.2	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

#### Qualifiers:

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

Page 5 of 5



### Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107

# Sample Log-In Check List

LABORATORT	Website: www.i	hallenvironmental.	com		
Client Name: BLAGG	Work Order Number	er: 1311585		RcptNo: 1	
Received by/date:	11/14/13				
Logged By: Michelle Garcia	11/14/2013 10:00:00	AM	Michael Gan	un	
Completed By: Michelle Garcia	11/1#/2013 10:15:11	AM	Michelle Com	)	
Reviewed By:	1111112		. ,		
Chain of Custody	A HO			***	
1. Custody seals intact on sample bottles?		Yes	No 🗌	Not Present ✓	
2. Is Chain of Custody complete?		Yes 🗸	No 🗌	Not Present	
3. How was the sample delivered?		Courier			
Log In		*			
Was an attempt made to cool the sample	es?	Yes 🗸	No 🗌	NA 🗀	
5. Were all samples received at a temperatu	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	st(s)?	Yes 🗸	No 🗌		
8. Are samples (except VOA and ONG) prop	perly 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	oken?	Yes	No 🗸	# of preserved	
				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:	
(in the first terms and th					
Special Handling (if applicable)					
16. Was client notified of all discrepancies wi	th this order?	Yes	No 🗌	NA 🗹	
Person Notified:	Date:				
By Whom:	Via:	eMail	Phone  Fax	In Person	
Regarding:	and the second section of the section	D Name - 50. 1 / Sc	#		
Client Instructions:	2 0 10 10 20 30	t simul a star tertion of	A CONTRACTOR OF COMMON AND STATE		
17. Additional remarks:		-			
18. Cooler Information		r annual rec c see			
Cooler No Temp °C Condition	Seal Intact Seal No Yes	Seal Date	Signed By		
1.0 Good	103				

C	hain	of-Cu	stody Record	Turn-Around	Time:	By MONDAY 1/18/2013					10		F	NV	/TE	3 C	NI	MF	N7	ΓΔΙ	L
Client:	BLAGO	ENGU	JEERNG INC.	□ Standard	<b>⋉</b> Rush	1					(2002)								AT		
		MERICA		Project Name	e:										men						
Mailing	Address	: DO T	30x 87	FLOR.	ANCE 100	)		400	01 LJ									7109			
				Project #:		- 10.00	1			)5-34							-410				
			M 87413	1				16	1. 50	13-34	10-0	CHICAGO III	ALC: UNKNOWN	2000	Req	W. S. College	THE REAL PROPERTY.	1			
email or		5-65	2-1199	Project Mana	ngor:			5	9				l la	STATE OF THE PARTY.		uoo					
			- 00-00	1 1			(8021)	only)	(CANA)					os	s,c						
Stan	Package: dard		☐ Level 4 (Full Validation)	J-6	SLA66		(8)	+ TPH (Gas	/ DRO /			SIMS)		PO4,	PCB's						
Accredi				Sampler: J	- BLAGG		TMES	H	R	_	=	20 S		102,	082						_
□ NEL/	AP	□ Othe	er	On Ice		·□/Nö: -,			80	18.	90	8270	.,	03,7	8/8		(A)				1
□ EDD	(Type)	,		Sample Tem	perature	a (cris) province in the same of the	1	BE	9)	pd 4	od 5	0 0	etals	ž	ide	8	>-	M			>
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 13/1585	BTEX + MITS	BTEX + MTBE	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Bubbles (Vor N)
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13 13	necessary,	samples sub	mitted to Hall Environmental may be habo	ontracted to other a	CCT CT	I I I I I I I I I I I I I I I I I I I	possi	bility. A	Anv su	b-cont	racteo	l data	will be	clear	ly nota	ited or	the a	nalytic	al reno	ort .	



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

OrderNo.: 1311953

November 26, 2013

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

FAX

RE: Florance 100

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 12 sample(s) on 11/21/2013 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

### Lab Order 1311953

Hall Environmental Analysis Laboratory, Inc. Date Reported: 11/26/2013

**CLIENT:** Blagg Engineering

Client Sample ID: NE Wall 9-pt comp. @ 8'-24'

**Project:** Florance 100

Collection Date: 11/15/2013 9:15:00 AM

Lab ID: 1311953-001

Matrix: SOIL Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analy	st: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/25/2013 10:32:13	AM 10474
Surr: DNOP	98.5	66-131	%REC	1	11/25/2013 10:32:13	AM 10474
EPA METHOD 8015D: GASOLINE RAN	IGE				Analy	st: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/22/2013 3:17:09 P	M 10465
Surr: BFB	92.6	74.5-129	%REC	1	11/22/2013 3:17:09 P	M 10465
EPA METHOD 8021B: VOLATILES					Analy	st: RAA
Benzene	ND	0.048	mg/Kg	1	11/22/2013 3:17:09 P	M 10465
Toluene	ND	0.048	mg/Kg	1	11/22/2013 3:17:09 P	M 10465
Ethylbenzene	ND	0.048	mg/Kg	1	11/22/2013 3:17:09 P	M 10465
Xylenes, Total	ND	0.096	mg/Kg	1	11/22/2013 3:17:09 P	M 10465
Surr: 4-Bromofluorobenzene	110	80-120	%REC	1	11/22/2013 3:17:09 P	M 10465
EPA METHOD 300.0: ANIONS					Analy	st: JRR
Chloride	35	30	mg/Kg	20	11/22/2013 3:49:34 P	M 10486

Northeast sidewall, along East side, to confirm excavation closure.

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

- 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
- 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

- Not Detected at the Reporting Limit Page 1 of 16 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1311953

Hall Environmental Analysis Laboratory, Inc. Date Reported: 11/26/2013

**CLIENT:** Blagg Engineering

Client Sample ID: GP-I @ 30'

Project: Florance 100

Collection Date: 11/15/2013 2:35:00 PM

1311953-002 Lab ID:

Matrix: SOIL Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analys	st: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/25/2013 11:37:31	AM 10474
Surr: DNOP	99.6	66-131	%REC	1	11/25/2013 11:37:31	AM 10474
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	st: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	11/22/2013 3:45:40 P	M 10465
Surr: BFB	91.4	74.5-129	%REC	1	11/22/2013 3:45:40 P	M 10465
EPA METHOD 8021B: VOLATILES					Analys	st: RAA
Benzene	ND	0.050	mg/Kg	1	11/22/2013 3:45:40 P	M 10465
Toluene	ND	0.050	mg/Kg	1	11/22/2013 3:45:40 P	M 10465
Ethylbenzene	ND	0.050	mg/Kg	1	11/22/2013 3:45:40 P	M 10465
Xylenes, Total	ND	0.10	mg/Kg	1	11/22/2013 3:45:40 P	M 10465
Surr: 4-Bromofluorobenzene	108	80-120	%REC	1	11/22/2013 3:45:40 P	M 10465
EPA METHOD 300.0: ANIONS					Analys	st: JRR
Chloride	ND	30	mg/Kg	20	11/22/2013 4:26:49 P	M 10486

GeoProbe Point I at 30 foot depth.

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

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

- Not Detected at the Reporting Limit Page 2 of 16 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

### Lab Order 1311953

Date Reported: 11/26/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: GP-I @ 4-pt comp 12'-24'

Project: Florance 100

Collection Date: 11/15/2013 1:50:00 PM

Lab ID: 1311953-003

Matrix: SOIL Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analy	yst: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/25/2013 11:59:26	AM 10474
Surr: DNOP	95.6	66-131	%REC	1	11/25/2013 11:59:26	AM 10474
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	yst: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	11/22/2013 4:14:15 F	PM 10465
Surr: BFB	91.6	74.5-129	%REC	1	11/22/2013 4:14:15 F	PM 10465
EPA METHOD 8021B: VOLATILES					Analy	st: RAA
Benzene	ND	0.047	mg/Kg	1	11/22/2013 4:14:15 F	PM 10465
Toluene	ND	0.047	mg/Kg	1	11/22/2013 4:14:15 F	PM 10465
Ethylbenzene	ND	0.047	mg/Kg	1	11/22/2013 4:14:15 F	PM 10465
Xylenes, Total	ND	0.095	mg/Kg	1	11/22/2013 4:14:15 F	PM 10465
Surr: 4-Bromofluorobenzene	108	80-120	%REC	1	11/22/2013 4:14:15 F	PM 10465
EPA METHOD 300.0: ANIONS					Analy	st: JRR
Chloride	110	30	mg/Kg	20	11/22/2013 4:39:14 F	PM 10486

GeoProbe Point I 4-point composite from 12' - 24' depth.

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

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- 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
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 3 of 16 P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

### Lab Order 1311953

Date Reported: 11/26/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: GP-J @ 27'-28'

**Project:** Florance 100

Collection Date: 11/18/2013 10:04:00 AM

Lab ID:

1311953-004

Matrix: SOIL

Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analyst	BCN
Diesel Range Organics (DRO)	1300	100		mg/Kg	10	11/25/2013 2:33:00 PM	10474
Surr: DNOP	0	66-131	S	%REC	10	11/25/2013 2:33:00 PM	10474
EPA METHOD 8015D: GASOLINE RAN	GE					Analyst	RAA
Gasoline Range Organics (GRO)	420	25		mg/Kg	5	11/25/2013 1:48:13 PM	10465
Surr: BFB	752	74.5-129	S	%REC	5	11/25/2013 1:48:13 PM	10465
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.25		mg/Kg	5	11/25/2013 1:48:13 PM	10465
Toluene	ND	0.25		mg/Kg	5	11/25/2013 1:48:13 PM	10465
Ethylbenzene	1.7	0.25		mg/Kg	5	11/25/2013 1:48:13 PM	10465
Xylenes, Total	4.1	0.50		mg/Kg	5	11/25/2013 1:48:13 PM	10465
Surr: 4-Bromofluorobenzene	149	80-120	S	%REC	5	11/25/2013 1:48:13 PM	10465
EPA METHOD 300.0: ANIONS						Analyst	: JRR
Chloride	ND	30		mg/Kg	20	11/22/2013 4:51:38 PM	10486

GeoProbe Point J at 27'-28' depth. Subsequently excavated.

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

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits J
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Not Detected at the Reporting Limit Page 4 of 16 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

#### Lab Order 1311953

Date Reported: 11/26/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: GP-K @ 30'-30.5'

Project:

Florance 100

Collection Date: 11/18/2013 11:50:00 AM

Lab ID:

1311953-005

Matrix: SOIL

Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analy	yst: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/25/2013 12:43:15	PM 10474
Surr: DNOP	97.4	66-131	%REC	1	11/25/2013 12:43:15	PM 10474
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	yst: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	11/22/2013 9:56:50 F	PM 10465
Surr: BFB	90.2	74.5-129	%REC	1	11/22/2013 9:56:50 F	PM 10465
EPA METHOD 8021B: VOLATILES					Analy	yst: RAA
Benzene	ND	0.047	mg/Kg	1	11/22/2013 9:56:50 F	PM 10465
Toluene	ND	0.047	mg/Kg	1	11/22/2013 9:56:50 F	PM 10465
Ethylbenzene	ND	0.047	mg/Kg	1	11/22/2013 9:56:50 F	PM 10465
Xylenes, Total	ND	0.093	mg/Kg	1	11/22/2013 9:56:50 F	PM 10465
Surr: 4-Bromofluorobenzene	108	80-120	%REC	1	11/22/2013 9:56:50 F	PM 10465
EPA METHOD 300.0: ANIONS					Analy	yst: <b>JRR</b>
Chloride	ND	30	mg/Kg	20	11/22/2013 5:28:52 F	PM 10486

GeoProbe Point K at 30'-30.5' depth (located north of northern extent of remediated area to confirm no impacts past pipeline)

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

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J 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
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Not Detected at the Reporting Limit Page 5 of 16 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

### Lab Order 1311953

Date Reported: 11/26/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: GP-L @ 25'-26'

Project: Florance 100

Collection Date: 11/18/2013 1:02:00 PM

1311953-006 Lab ID:

Matrix: SOIL

Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/25/2013 1:05:04 PM 10474
Surr: DNOP	95.2	66-131	%REC	1	11/25/2013 1:05:04 PM 10474
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	11/22/2013 10:25:24 PM 10465
Surr: BFB	88.8	74.5-129	%REC	1	11/22/2013 10:25:24 PM 10465
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.047	mg/Kg	1	11/22/2013 10:25:24 PM 10465
Toluene	ND	0.047	mg/Kg	1	11/22/2013 10:25:24 PM 10465
Ethylbenzene	ND	0.047	mg/Kg	1	11/22/2013 10:25:24 PM 10465
Xylenes, Total	ND	0.095	mg/Kg	1	11/22/2013 10:25:24 PM 10465
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	11/22/2013 10:25:24 PM 10465
EPA METHOD 300.0: ANIONS					Analyst: JRR
Chloride	ND	30	mg/Kg	20	11/22/2013 5:41:16 PM 10486

GeoProbe Point L at 25'-26' depth.

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

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- 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
- Not Detected at the Reporting Limit Page 6 of 16 Sample pH greater than 2 for VOA and TOC only. P
- RL Reporting Detection Limit

Lab Order 1311953

Date Reported: 11/26/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: GP-M @ 31'

Project: Florance 100

Collection Date: 11/18/2013 2:32:00 PM

1311953-007 Lab ID:

Matrix: SOIL

Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed Batch
EPA METHOD 8015D: DIESEL RANGE C	RGANICS				Analyst: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/25/2013 1:27:02 PM 10474
Surr: DNOP	94.7	66-131	%REC	1	11/25/2013 1:27:02 PM 10474
EPA METHOD 8015D: GASOLINE RANG	Ε				Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/22/2013 11:22:30 PM 10465
Surr: BFB	89.8	74.5-129	%REC	1	11/22/2013 11:22:30 PM 10465
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.048	mg/Kg	1	11/22/2013 11:22:30 PM 10465
Toluene	ND	0.048	mg/Kg	1	11/22/2013 11:22:30 PM 10465
Ethylbenzene	ND	0.048	mg/Kg	1	11/22/2013 11:22:30 PM 10465
Xylenes, Total	ND	0.096	mg/Kg	1	11/22/2013 11:22:30 PM 10465
Surr: 4-Bromofluorobenzene	106	80-120	%REC	1	11/22/2013 11:22:30 PM 10465
EPA METHOD 300.0: ANIONS					Analyst: JRR
Chloride	ND	30	mg/Kg	20	11/22/2013 5:53:41 PM 10486

GeoProbe Point M at 31' depth.

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

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- 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
- Not Detected at the Reporting Limit Page 7 of 16 Sample pH greater than 2 for VOA and TOC only. P
- RL Reporting Detection Limit

Lab Order 1311953

Date Reported: 11/26/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Florance 100

Lab ID: 1311953-008

Client Sample ID: GP-N 4 pt comp 12'-24'

Collection Date: 11/18/2013 3:05:00 PM

Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed Ba	itch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst: BC	CN CN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/25/2013 1:48:59 PM 104	474
Surr: DNOP	87.7	66-131	%REC	1	11/25/2013 1:48:59 PM 104	474
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst: RA	λA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/22/2013 11:51:02 PM 104	465
Surr: BFB	90.0	74.5-129	%REC	1	11/22/2013 11:51:02 PM 104	465
EPA METHOD 8021B: VOLATILES					Analyst: RA	\A
Benzene	ND	0.048	mg/Kg	1	11/22/2013 11:51:02 PM 104	465
Toluene	ND	0.048	mg/Kg	. 1	11/22/2013 11:51:02 PM 104	465
Ethylbenzene	ND	0.048	mg/Kg	1	11/22/2013 11:51:02 PM 104	465
Xylenes, Total	ND	0.096	mg/Kg	1	11/22/2013 11:51:02 PM 104	465
Surr: 4-Bromofluorobenzene	107	80-120	%REC	1	11/22/2013 11:51:02 PM 104	465
EPA METHOD 300.0: ANIONS					Analyst: JR	lR.
Chloride	130	30	mg/Kg	20	11/22/2013 6:06:05 PM 104	486

Matrix: SOIL

GeoProbe Point N 4-point composite from 12'-24' depth.

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

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit Page 8 of 16
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1311953

Date Reported: 11/26/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Florance 100

1311953-009 Lab ID:

Matrix: SOIL

Client Sample ID: GP-N @ 28'

Collection Date: 11/18/2013 4:15:00 PM

Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Anal	/st: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/25/2013 11:42:08	AM 10474
Surr: DNOP	83.1	66-131	%REC	1	11/25/2013 11:42:08	AM 10474
EPA METHOD 8015D: GASOLINE RAN	IGE				Analy	st: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	11/23/2013 12:19:32	AM 10465
Surr: BFB	90.6	74.5-129	%REC	1	11/23/2013 12:19:32	AM 10465
EPA METHOD 8021B: VOLATILES					Analy	st: RAA
Benzene	ND	0.050	mg/Kg	1	11/23/2013 12:19:32	AM 10465
Toluene	ND	0.050	mg/Kg	1	11/23/2013 12:19:32	AM 10465
Ethylbenzene	ND	0.050	mg/Kg	1	11/23/2013 12:19:32	AM 10465
Xylenes, Total	ND	0.10	mg/Kg	1	11/23/2013 12:19:32	AM 10465
Surr: 4-Bromofluorobenzene	107	80-120	%REC	1	11/23/2013 12:19:32	AM 10465
EPA METHOD 300.0: ANIONS					Analy	st: JRR
Chloride	ND	30	mg/Kg	20	11/22/2013 6:18:30 F	PM 10486

GeoProbe Point N at 28' depth.

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
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Holding times for preparation or analysis exceeded Н

Analyte detected in the associated Method Blank

- ND Not Detected at the Reporting Limit
- Not Detected at the Reporting Limit Page 9 of 16 Sample pH greater than 2 for VOA and TOC only. P
- RL Reporting Detection Limit

### Lab Order 1311953

Date Reported: 11/26/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: GP-O @ 27'

**Project:** Florance 100

Collection Date: 11/19/2013 9:02:00 AM

Lab ID:

1311953-010

Matrix: SOIL

Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE (	ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	330	10	mg/Kg	1	11/26/2013 9:53:46 AM	10474
Surr: DNOP	97.0	66-131	%REC	1	11/26/2013 9:53:46 AM	10474
EPA METHOD 8015D: GASOLINE RANG	SE .				Analyst	RAA
Gasoline Range Organics (GRO)	8.5	4.8	mg/Kg	1	11/25/2013 2:45:22 PM	10465
Surr: BFB	110	74.5-129	%REC	1	11/25/2013 2:45:22 PM	10465
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.048	mg/Kg	1	11/25/2013 2:45:22 PM	10465
Toluene	ND	0.048	mg/Kg	1	11/25/2013 2:45:22 PM	10465
Ethylbenzene	ND	0.048	mg/Kg	1	11/25/2013 2:45:22 PM	10465
Xylenes, Total	ND	0.097	mg/Kg	1	11/25/2013 2:45:22 PM	10465
Surr: 4-Bromofluorobenzene	111	80-120	%REC	1	11/25/2013 2:45:22 PM	10465
EPA METHOD 300.0: ANIONS					Analyst	JRR
Chloride	ND	30	mg/Kg	20	11/22/2013 6:30:55 PM	10486

GeoProbe Point) at 27' depth. Subsequently Excavated.

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

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- 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
  - Not Detected at the Reporting Limit Page 10 of 16 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

### **Analytical Report** Lab Order 1311953

Date Reported: 11/26/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: GP-O @ 29'

Project: Florance 100

Collection Date: 11/19/2013 9:12:00 AM

Lab ID:

1311953-011

Matrix: SOIL

Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analys	st: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/25/2013 12:42:35 F	PM 10474
Surr: DNOP	76.2	66-131	%REC	1	11/25/2013 12:42:35 F	PM 10474
EPA METHOD 8015D: GASOLINE RAN	GE				Analys	st: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	. 1	11/23/2013 1:16:26 A	M 10465
Surr: BFB	88.5	74.5-129	%REC	1	11/23/2013 1:16:26 A	M 10465
EPA METHOD 8021B: VOLATILES					Analys	st: RAA
Benzene	ND	0.048	mg/Kg	1	11/23/2013 1:16:26 A	M 10465
Toluene	ND	0.048	mg/Kg	1	11/23/2013 1:16:26 A	M 10465
Ethylbenzene	ND	0.048	mg/Kg	1	11/23/2013 1:16:26 Al	M 10465
Xylenes, Total	ND	0.096	mg/Kg	1	11/23/2013 1:16:26 A	M 10465
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	11/23/2013 1:16:26 A	M 10465
EPA METHOD 300.0: ANIONS					Analys	st: <b>JRR</b>
Chloride	ND	30	mg/Kg	20	11/22/2013 6:43:20 PI	M 10486

GeoProbe Point O at 29 foot depth. Subsequently excavated.

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

- 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
- 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
- Not Detected at the Reporting Limit Page 11 of 16 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

#### Lab Order 1311953

Hall Environmental Analysis Laboratory, Inc. Date Reported: 11/26/2013

CLIENT: Blagg Engineering

Client Sample ID: GP-O @ 30'

**Project:** Florance 100

Collection Date: 11/19/2013 11:05:00 AM

Lab ID: 1311953-012

Matrix: SOIL

Received Date: 11/21/2013 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analyst:	BCN
Diesel Range Organics (DRO)	3100	100		mg/Kg	10	11/26/2013 10:15:30 AM	10474
Surr: DNOP	0	66-131	S	%REC	10	11/26/2013 10:15:30 AM	10474
EPA METHOD 8015D: GASOLINE RANG	GE					Analyst:	RAA
Gasoline Range Organics (GRO)	700	24		mg/Kg	5	11/25/2013 3:13:59 PM	10465
Surr: BFB	1100	74.5-129	S	%REC	5	11/25/2013 3:13:59 PM	10465
EPA METHOD 8021B: VOLATILES						Analyst:	RAA
Benzene	ND	0.24		mg/Kg	5	11/25/2013 3:13:59 PM	10465
Toluene	ND	0.24		mg/Kg	5	11/25/2013 3:13:59 PM	10465
Ethylbenzene	1.7	0.24		mg/Kg	5	11/25/2013 3:13:59 PM	10465
Xylenes, Total	4.9	0.47		mg/Kg	5	11/25/2013 3:13:59 PM	10465
Surr: 4-Bromofluorobenzene	183	80-120	S	%REC	5	11/25/2013 3:13:59 PM	10465
EPA METHOD 300.0: ANIONS						Analyst:	JRR
Chloride	ND	30		mg/Kg	20	11/22/2013 6:55:45 PM	10486

GeoProbe Point O at 30' depth. Subsequently excavated.

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

- 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
- 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
- Not Detected at the Reporting Limit Page 12 of 16 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1311953

26-Nov-13

Client:

Blagg Engineering

Project:

Florance 100

Sample ID MB-10486

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

Prep Date:

**PBS** 

Batch ID: 10486

RunNo: 15033

11/22/2013

Analysis Date: 11/22/2013

SeqNo: 434229

Units: mg/Kg

Analyte

Result

PQL

SPK value SPK Ref Val %REC LowLimit

HighLimit

**RPDLimit** 

Qual

Chloride

ND 1.5

Sample ID LCS-10486

SampType: LCS

TestCode: EPA Method 300.0: Anions

Client ID:

LCSS

11/22/2013

Batch ID: 10486 Analysis Date: 11/22/2013 RunNo: 15033

SeqNo: 434230

Units: mg/Kg

Analyte

Prep Date:

Result PQL

SPK value SPK Ref Val

%REC

LowLimit

HighLimit

94.2

14 1.5 15.00

110

**RPDLimit** 

Qual

Chloride

%RPD

%RPD

Qualifiers:

R

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

RSD is greater than RSDlimit 0

RPD outside accepted recovery limits Spike Recovery outside accepted recovery limits В 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 for VOA and TOC only.

Reporting Detection Limit

Page 13 of 16

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1311953 26-Nov-13

Client:

Blagg Engineering

Project: Floran	ce 100								
Sample ID MB-10474	SampType: ME	BLK	Test	Code: EP	A Method	8015D: Diese	el Range C	Organics	
Client ID: PBS	Batch ID: 104	474	R	tunNo: 14	1985				
Prep Date: 11/21/2013	Analysis Date: 11	/22/2013	S	eqNo: 43	32946	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	9.4	10.00		94.4	66	131			
Sample ID LCS-10474	SampType: LC	S	Test	tCode: EP	A Method	8015D: Diese	el Range C	Organics	
Client ID: LCSS	Batch ID: 104	474	R	lunNo: 14	1985				
Prep Date: 11/21/2013	Analysis Date: 11	1/22/2013	S	eqNo: 43	32958	Units: mg/K	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57 10	50.00	0	114	62.1	127			
Surr: DNOP	5.2	5.000		104	66	131			
Sample ID 1311953-001AI	MS SampType: MS	6	Test	tCode: EP	A Method	8015D: Diese	el Range (	Organics	
Client ID: NE Wall 9-pt c	omp. Batch ID: 10	474	R	RunNo: 15	5015				
Prep Date: 11/21/2013	Analysis Date: 11	1/25/2013	S	SeqNo: 43	34386	Units: mg/K	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50 10	49.85	0	100	47.4	148			
Surr: DNOP	4.8	4.985		96.0	66	131			
Sample ID 1311953-001Al	MSD SampType: MS	SD	Test	tCode: EP	PA Method	8015D: Diese	el Range (	Organics	
Client ID: NE Wall 9-pt c	omp. Batch ID: 10	474	R	RunNo: 15	5015				
Prep Date: 11/21/2013	Analysis Date: 11	1/25/2013	S	SeqNo: 43	34387	Units: mg/K	(g		
Analyte	Result PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	49 9.9 4.6	49.60 4.960	0	99.0 92.2	47.4 66	148 131	1.59 0	22.7 0	
Suil. DNOF	4.0	4.900		52.2		151	-	-	
Sample ID MB-10502	SampType: ME	BLK	Test	tCode: EP	PA Method	8015D: Diese	el Range (	Organics	
Client ID: PBS	Batch ID: 10	502		RunNo: 15					
Prep Date: 11/25/2013	Analysis Date: 11	1/26/2013	S	SeqNo: 43	34751	Units: %RE	С		
Analyte	Result PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11	10.00		106	66	131		-	
Sample ID LCS-10502	SampType: LC	S	Test	tCode: EF	PA Method	8015D: Diese	el Range (	Organics	
Client ID: LCSS	Batch ID: 10	502	R	RunNo: 15	5051				
			0	egNo: 43	24752	Units: %RE	C		
Prep Date: 11/25/2013	Analysis Date: 11	1/26/2013	5	eqino. 43	14132	Office. /BIKE	C		
Prep Date: 11/25/2013 Analyte	Analysis Date: 11  Result PQL  5.2		SPK Ref Val		LowLimit 66	HighLimit 131	%RPD	RPDLimit	Qual

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 14 of 16
- Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1311953

26-Nov-13

Client:

Blagg Engineering

Project:

Florance 100

Project: Floranc	e 100						
Sample ID MB-10465	SampType: MBLK	TestCode: EPA Method	8015D: Gasoline Rang	e			
Client ID: PBS	Batch ID: 10465	RunNo: 14998					
Prep Date: 11/21/2013	Analysis Date: 11/22/2013	SeqNo: 434062	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Gasoline Range Organics (GRO)	ND 5.0						
Surr: BFB	920 1000	92.3 74.5	129				
Sample ID LCS-10465	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Rang	e			
Client ID: LCSS	Batch ID: 10465	RunNo: 14998					
Prep Date: 11/21/2013	Analysis Date: 11/22/2013	SeqNo: 434063	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Gasoline Range Organics (GRO)	24 5.0 25.00	0 97.3 74.5	126				
Surr: BFB	1000 1000	100 74.5	129				
Sample ID MB-10482	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range					
Client ID: PBS	Batch ID: 10482	RunNo: 15061					
Prep Date: 11/22/2013	Analysis Date: 11/25/2013	SeqNo: 434684	Units: %REC				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Surr: BFB	930 1000	92.6 74.5	129				
Sample ID LCS-10482	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Range	e			
Client ID: LCSS	Batch ID: 10482	RunNo: 15061					
Prep Date: 11/22/2013	Analysis Date: 11/25/2013	SeqNo: 434685	Units: %REC				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Surr: BFB	1000 1000	99.6 74.5	129				

#### 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 for VOA and TOC only.
- RL Reporting Detection Limit

Page 15 of 16

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1311953

26-Nov-13

Client:

Blagg Engineering

Project:

Florance 100

Project:	Floranc	E 100									
Sample ID	MB-10465	SampT	ype: ME	BLK	Tes	tCode: EF	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batch	ID: <b>10</b> 4	465	F	RunNo: 14998					
Prep Date:	11/21/2013	Analysis D	ate: 11	/22/2013	S	eqNo: 4	34092	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-Bromo	ofluorobenzene	1.1		1.000		111	80	120			
Sample ID	LCS-10465	S-10465 SampType: LCS				tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batch ID: 10465			F	RunNo: 14998					
Prep Date:	11/21/2013	Analysis D	ate: 11	/22/2013	S	eqNo: 4	34093	Units: mg/Kg			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.99	0.050	1.000	0	99.0	80	120			
Toluene		0.97	0.050	1.000	0	96.9	80	120			
Ethylbenzene		1.0	0.050	1.000	0	102	80	120			
Xylenes, Total		3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromo	ofluorobenzene	1.2		1.000		117	80	120			
Sample ID	MB-10482	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batch	ID: <b>10</b> 4	482	F	RunNo: 1	5061				
Prep Date:	11/22/2013	Analysis D	ate: 11	/25/2013	S	eqNo: 4	34726	Units: %RE	С		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromo	ofluorobenzene	1.1		1.000		108	80	120			
Sample ID	LCS-10482	SampT	SampType: LCS TestCode: EPA Method 8021B: Volatiles								

	Sample ID LCS-10482	SampType	LCS	Test	Code: E	PA Method	8021B: Vola	tiles		
	Client ID: LCSS	Batch ID:	10482	Rı	unNo: 1	5061				
	Prep Date: 11/22/2013	Analysis Date:	11/25/2013	Se	eqNo: 4	134727	Units: %RE	C		
l	Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	Surr: 4-Bromofluorobenzene	1.1	1.000		113	80	120			

### Qualifiers:

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

Page 16 of 16



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

## Sample Log-In Check List

Client Name: **BLAGG** Work Order Number: 1311953 RcptNo: 1 Received by/date: Logged By: Michelle Garcia 11/21/2013 9:50:00 AM Completed By: Michelle Garcia 11/21/2013 11:12:27 AM Reviewed By: Chain of Custody No 🗌 Not Present Yes 1. Custody seals intact on sample bottles? No . Yes 🗸 Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In Yes 🗸 No . NA 🗌 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 Yes 🗸 Yes 🗸 6. Sample(s) in proper container(s)? No Yes V 7. Sufficient sample volume for indicated test(s)? No 8. Are samples (except VOA and ONG) properly preserved? NA 🗌 No V 9. Was preservative added to bottles? Yes No 🗌 No VOA Vials 10. VOA vials have zero headspace? Yes No 🗸 11. Were any sample containers received broken? Yes # of preserved bottles checked Yes 🗸 No 🗌 for pH: 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No ... Yes V 13. Are matrices correctly identified on Chain of Custody? V No 14. Is it clear what analyses were requested? YAS No 🗌 Checked by: Yes 🗸 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes NA 🗸 16. Was client notified of all discrepancies with this order? No 🔲 Person Notified: Date: eMail Phone Fax In Person Via: By Whom: Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date 1.0 Good Yes

C	hain-	of-Cu	stody Record	Turn-Around	Time:	11-26-2013			92	L	AL		F	NV	TE	20	N R	ИF	NT	ΔI	
Client:	BLAGE	ENG	NEERWO IX.	□ Standard	Rush			300											TO		r
			A	Project Name								v.hal									
Mailing	Address:	Poi	30× 97	FL	ORANCE	100		490	)1 H			1E -						109			
		****	NM 87413	Project #:						5-34				ax							
			32-1199										W. D. State of the last	sis	1200 6 110	Company of the	-				
email or				Project Mana	ger:			(ylu	MRO)					(4)							
QA/QC F	Package:			J	BLAG6		WB's (8021)	as ol	奉			(S)		, S(	PCB's						
Stan	-		☐ Level 4 (Full Validation)				3,2 (8	(G	DRO /			SIMS)		2,PC	2 P(						
Accredi		C Otho		Sampler:	J. BLA		TIME	TPH (Gas only)	-	£.	1.1	8270		8	8082						or N)
□ EDD		LI OTHE	r	On Ice: Sample Tem	Yes	L No	+	+ MTBE +	GR	41	1 50	ō	als Sign	SN S	les /		V A				\ or
	(Type)_			CATHER STREET	A Committee of the Comm			MTB	5B (	thoc	thod	310	8 Metals	D,	Pesticides	VOA	ini-	CHURRINE			les (
Date	Time	Matrix	Sample Request ID	1	Preservative	HEAL No.	T ×	+ ×	801	(Me	(Me	8) 8,	A 8	ns (I	Pe	B	(Se	37			qqn
No Principle of Control				Type and #	Туре	1211953	BTEX	BTEX	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310	RCRA	Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081	8260B (VOA)	8270 (Semi-VOA)	3			Air Bubbles (Y
15/12	0915	SOIL	NE WALL	402×1	COUL	-001	×		X	•						- W	<u> </u>	×		$\top$	
ii	1435	11	9-pt comp 8-24	16	и	-002	×		×									×	$\neg$		
- 21	1350	3 t	GP-I @ 30' GP-I @ conp 12-24	31	if	-003	×		X					$\neg$				7		1	$\vdash$
/18/13	1004	\$c	GP-J@ 27'-28'	34	41	-004	×		X									×	$\top$	+	
il	1150	и(	GP-K @ 30'-30.5'	3.6	11	-005	×		×									×		+	$\vdash$
Łį.	1302	11	GP-L @25'-26"	14	íš	-1000	×		×									×	$\neg$	$\top$	$\vdash$
ìι	1432	łj	6P-M @ 31'	И	t(	-101	x		×								T	¥			T
il	1505	ξŧ	GP-N 4pt comp 12-2	1 11	ų	-00X	×		×									×	$\top$	$\top$	$\vdash$
11	1615	- 10	6P-N @ 28'	μi	ч	-179	×		×									×	$\top$	$\top$	T
1/19/13	0902	16	6P-0@27'	.64	ч	-010	×		×									×			
11	0912	il	6P-0 @ 29'	is	14	-011	X		×		ь							×			Г
रें।	1105	iì	6P-P@30'	it	11	-01Z	×		x									×			
Date:	Time:	Relinquish		Received by:	, )	Date Time	Ren	narks	s:	Z	) iii.	B	P								
20/2013	1104	Je.	11 13609	Mistre	Whelter	1/20/2013 1104								25	Ej	ER	KO	55	TS		
Date:	Time:	Relinquish	ed by:	Received by:	$\bigcirc$	Date Time															
121/13	643	M	istru Walla c	Muh	e thruc	11213 0950		•				Aci			- 40		F				
If	necessary,	amples subr	mitted to Hall Environmental may be subco	ontractely to other ac	ccredited laboratorie	es. This serves as notice of this	possit	oility. A	ny su	b-cont	racted	data	will be	clearly	y nota	ted on	the ar	nalytica	I report.		



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

OrderNo.: 1312465

December 19, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX (505) 632-3903

RE: Florance 100

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/11/2013 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Only

4901 Hawkins NE

Albuquerque, NM 87109

#### Lab Order 1312465

Date Reported: 12/19/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: NE Sidewall 3-pt Comp 8'-24'

Project: Florance 100 Collection Date: 12/5/2013 9:05:00 AM

Lab ID: 1312465-001

Matrix: SOIL Received Date: 12/11/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	SE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	230	10	mg/Kg	1	12/13/2013 2:00:27 PN	1 10750
Surr: DNOP	89.2	66-131	%REC	1	12/13/2013 2:00:27 PM	1 10750
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/12/2013 4:53:53 PN	1 10755
Surr: BFB	98.7	74.5-129	%REC	1	12/12/2013 4:53:53 PM	1 10755
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.048	mg/Kg	1	12/12/2013 4:53:53 PM	1 10755
Toluene	ND	0.048	mg/Kg	1	12/12/2013 4:53:53 PM	1 10755
Ethylbenzene	ND	0.048	mg/Kg	1	12/12/2013 4:53:53 PM	1 10755
Xylenes, Total	ND	0.096	mg/Kg	1	12/12/2013 4:53:53 PM	1 10755
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	12/12/2013 4:53:53 PM	1 10755
EPA METHOD 300.0: ANIONS					Analys	t: JRR
Chloride	44	30	mg/Kg	20	12/16/2013 1:28:26 PM	1 10813

Northeast sidewall Near Williams pipeline. Residual impacts not recoverable due to proximity to pipeline. GeoProbe Points M and K indicated no residual impacts at groundwater in this vicinity.

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

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits J
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Not Detected at the Reporting Limit Page 1 of 5 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1312465

19-Dec-13

Client:

Blagg Engineering

Project:

Florance 100

Sample ID MB-10813

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 10813

RunNo: 15549

Prep Date: 12/16/2013 Analysis Date: 12/16/2013

SeqNo: 447221

Units: mg/Kg

Analyte Chloride

Result PQL ND 1.5

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD **RPDLimit**  Qual

Sample ID LCS-10813

SampType: LCS

Client ID: LCSS

Prep Date:

Batch ID: 10813

RunNo: 15549

Units: mg/Kg

Analyte

12/16/2013

Analysis Date: 12/16/2013

SeqNo: 447222

%RPD

Qual

PQL

15.00

Chloride

14

110

91.6

**RPDLimit** 

SPK value SPK Ref Val %REC LowLimit

TestCode: EPA Method 300.0: Anions

HighLimit

Qualifiers:

Value exceeds Maximum Contaminant Level.

Spike Recovery outside accepted recovery limits

E Value above quantitation range Analyte detected below quantitation limits

RSD is greater than RSDlimit 0 RPD outside accepted recovery limits R

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded H ND

Sample pH greater than 2 for VOA and TOC only. Reporting Detection Limit

Page 2 of 5

Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

5.5

WO#:

1312465

19-Dec-13

Client:

Blagg Engineering

Project:

Surr: DNOP

Florance 100

Sample ID MB-10750	SampType: MBLK	TestCode:	EPA Method 801	5D: Diesel Range C	Organics
Client ID: PBS	Batch ID: 10750	RunNo:	15473		
Prep Date: 12/11/2013	Analysis Date: 12/13/201	3 SeqNo:	<b>445458</b> Un	its: mg/Kg	
Analyte	Result PQL SPK va	alue SPK Ref Val %RE	C LowLimit Hi	ghLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	ND 10				
Surr: DNOP	8.8 10	0.00 87.	8 66	131	
Sample ID LCS-10750	SampType: LCS	TestCode:	EPA Method 801	5D: Diesel Range C	Organics
Client ID: LCSS	Batch ID: 10750	RunNo:	15473		
Prep Date: 12/11/2013	Analysis Date: 12/13/201	3 SeqNo:	<b>445579</b> Un	its: mg/Kg	
Analyte	Result PQL SPK va	alue SPK Ref Val %RE	C LowLimit Hi	ghLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	58 10 50	0.00 0 11	5 62.1	127	

109

66

131

5.000

#### 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 for VOA and TOC only.
- RL Reporting Detection Limit

Page 3 of 5

## Hall Environmental Analysis Laboratory, Inc.

960

WO#:

1312465 19-Dec-13

Client:

Blagg Engineering

Project:

Surr: BFB

Florance 100

	- He								
Sample ID MB-10755	SampType: MBL	(	Tes	tCode: EF	A Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch ID: 10755		F	RunNo: 15	5471				
Prep Date: 12/11/2013	Analysis Date: 12/12	2/2013	S	eqNo: 44	15353	Units: mg/K	g		
Analyte	Result PQL S	PK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND 5.0								
Surr: BFB	880	1000		88.5	74.5	129			
Sample ID LCS-10755	SampType: LCS		Tes	tCode: EF	A Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch ID: 10755		F	RunNo: 1	5471				
Prep Date: 12/11/2013	Analysis Date: 12/12	2/2013		SeqNo: 44	15354	Units: mg/K	g		
Analyte	Result PQL S	PK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30 5.0	25.00	0	120	74.5	126			

95.8

74.5

129

1000

### 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 5

- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

### Hall Environmental Analysis Laboratory, Inc.

0.050

0.050

0.050

0.10

1.000

1.000

1.000

3.000

1.000

1.1

1.1

1.1

3.2

1.1

WO#:

1312465

19-Dec-13

Client:

Blagg Engineering

Project:

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

Florance 100

Sample ID MB-10755	SampType: MBI	_K	Tes	Code: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch ID: 107	55	R	unNo: 1	5471				
Prep Date: 12/11/2013	Analysis Date: 12/	12/2013	S	eqNo: 4	45368	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		102	80	120			
Sample ID LCS-10755	SampType: LCS		Test	Code: EF	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch ID: 107	55	R	unNo: 1	5471				
Prep Date: 12/11/2013	Analysis Date: 12/	12/2013	S	eqNo: 44	45369	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

0

0

0

0

110

107

109

108

106

80

80

80

80

80

120

120

120

120

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 for VOA and TOC only.
- 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	Work Order Number	: 131246	55		RcptNo:	1
Received by/dat	e Km	19/11/13					
Logged By:	Ashley Gallegos	12/11/2013 10:00:00 <i>/</i>	ΔM	A	7		
Completed By:	Askley Gallegos	12/11/2013 11:48:07	MA	A	7		
Reviewed By:	A A	5 12/11/13			Q		5
Chain of Cus	stody	5 16/11/		*			
	als intact on sample bottles	?	Yes	N	0 1	Not Present ✔	
	Custody complete?		Yes	✓ N	0	Not Present	
3. How was the	e sample delivered?		Courie	<u>er</u>			
Log In							
4. Was an att	empt made to cool the sam	ples?	Yes	<b>V</b>	lo 🗌	NA 🗌	
5. Were all sa	mples received at a temper	rature of >0° C to 6.0°C	Yes	✓ N	o  .	NA	
6. Sample(s)	in proper container(s)?		Yes	<b>v</b> , N	lo		
7. Sufficient sa	ample volume for indicated	test(s)?	Yes	✓ N	o []		
8. Are sample	s (except VOA and ONG) p	roperly preserved?	Yes	✓ N	o 🗔		
9. Was preser	rvative added to bottles?		Yes	N	0	NA 🗌	
10.VOA vials h	nave zero headspace?		Yes	N	o 🗆	No VOA Vials	
11. Were any	sample containers received	broken?	Yes	<u> </u>	lo 🗸	# of preserved	
	rwork match bottle labels?		Yes	V N	0	bottles checked for pH:	
	epancies on chain of custoo		Vaa	M N	0	(<2 / Adjusted?	or >12 unless noted)
	es correctly identified on Cha hat analyses were requeste	-	Yes		o [_]	,	
15. Were all ho	olding times able to be met? y customer for authorization			r1	o 🗆	Checked by:	
(II IIO, IIOUI)	y custoffier for authorization	-/					
Special Han	dling (if applicable)			2			
16. Was client	notified of all discrepancies	with this order?	Yes	[] N	0 .	NA 🗸	
Perso	on Notified:	Date:					
By W	/hom:	Via:	eMai	I   Phone	Fax	In Person	
Rega	arding:		A-144		***************************************	mid and be the world him for the historical and historical properties of the province of the control of the con-	
Clien	t Instructions:						
17. Additional	remarks:						
18. Cooler Int	formation						
Cooler	No Temp C Condition	Seal Intact   Seal No	Seal Da	te Signe	Ву		
1	1.1 Good	Yes			30 M 00 (30 T) M 00 (30 T)		

С	hain-	of-Cu	ıstody Record	Turn-Around	Time:						1-	IA	E	FI	NV	/TF	20	NI	ИE	NT	AL	
Client:	BLAGE	ENGL	DEERLUG INC.	Standard	□ Rush	l															RY	
	300 A	MEDIT	Δ.	Project Name									v.hal									
Mailing	Address	PA	A 30× 87	FLORA	NOE 100	2			10	01 H								м 87	'109			
K	00115	10.4	1110 97117	Project #:							5-34							-4107				
			NM 87413	-						71. 00	13-34	J-3:	OF REAL PROPERTY.		sis		AND DESCRIPTION OF	Sur-French St.				
		- 65	2-1199	Project Mana					5	ନ												
email o			ne certain a	1	-			21)	onl	H					SO,	S.S						
Stan	Package:		☐ Level 4 (Full Validation)	J.B.	7766			(80	Gas	U O			SIMS)		204,	PCE						
Accredi			Lover + (r all validation)	Sampler: -	- BLAGG			10	) H	DR			0.0		02,1	382						_
□ NEL		□ Othe	er		Pryes .			H	7	0	8,1	7.7	827		N,E	/ 8(		F	W	ł		N IC
□ EDD	(Type)			Sample Tem	perature: /	6			3E +	(GR	d 4	d 5(	ō	tals	N,	des	2	0	101			2
Date	Time	Matrix	Sample Request ID		Preservative Type	HE		BTEX + MTBE - TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / WRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,Cl,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLOVENDE			Air Bubbles (Y or N)
45/13	09/00	Sale	NE SIDEWALL 3-pt comp 8-24	402×1	COOL		-001	X	_	X		_				35			X	$\top$		
113	0 203	JUIL	3-pe comp 8-2-1	100			001	,	-	/-		-						H		+	-	_
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Date:	Time:	Relinquish	med by:	Received by:	n Vall	Date 12/10/	Time 13 /250	Rer	nark	s:	Į. F	31Ll Par	L [	3P	21	=E	IR	K	∂ <u>દ્</u> ર	TS		
Date: 12/10/13	Time:	Relinquish	A Latte	Received by:		Date —	Time												· (p			
		samples sub	mitted to Hall Environmental may be subo	contracted to other a	ccredited laboratoric	es. This serve		possi	bility.	Any su		-						-		-		-
					/																	



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

December 19, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183 FAX (505) 632-3903

RE: Florance 100

OrderNo.: 1312620

### Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/14/2013 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

#### Lab Order 1312620

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/19/2013

**CLIENT:** Blagg Engineering

Client Sample ID: West Wall N of Well 5-pt 8'-28'

Project: Florance 100

Collection Date: 12/12/2013 2:25:00 PM

Lab ID: 1312620-001

Matrix: SOIL Received Date: 12/14/2013 10:30:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/17/2013 1:17:32 PM	10798
Surr: DNOP	73.3	66-131	%REC	1	12/17/2013 1:17:32 PM	10798
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	. 1	12/17/2013 1:36:44 PM	10811
Surr: BFB	93.0	74.5-129	%REC	1	12/17/2013 1:36:44 PM	10811
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.047	mg/Kg	1	12/17/2013 1:36:44 PM	10811
Toluene	ND	0.047	mg/Kg	1	12/17/2013 1:36:44 PM	10811
Ethylbenzene	ND	0.047	mg/Kg	1	12/17/2013 1:36:44 PM	10811
Xylenes, Total	ND	0.094	mg/Kg	1	12/17/2013 1:36:44 PM	10811
Surr: 4-Bromofluorobenzene	109	80-120	%REC	1	12/17/2013 1:36:44 PM	10811
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Chloride	43	30	mg/Kg	20	12/16/2013 2:30:30 PM	10813

West Wall North of PxA marker, 5 point composite from 8'-28 feet. Sampled to confirm excavation closure

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

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

- Not Detected at the Reporting Limit Page 1 of 6 Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1312620

Date Reported: 12/19/2013

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: Wall N of Well 5-pt 8'-28'

**Project:** Florance 100

**Collection Date:** 12/13/2013 1:16:00 PM

Lab ID: 1312620-002

Received Date: 12/14/2013 10:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/17/2013 1:40:06 PM	10798
Surr: DNOP	84.4	66-131	%REC	1	12/17/2013 1:40:06 PM	10798
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/17/2013 2:05:27 PM	10811
Surr: BFB	93.4	74.5-129	%REC	1	12/17/2013 2:05:27 PM	10811
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.049	mg/Kg	1	12/17/2013 2:05:27 PM	10811
Toluene	ND	0.049	mg/Kg	1	12/17/2013 2:05:27 PM	10811
Ethylbenzene	ND	0.049	mg/Kg	1	12/17/2013 2:05:27 PM	10811
Xylenes, Total	ND	0.099	mg/Kg	1	12/17/2013 2:05:27 PM	10811
Surr: 4-Bromofluorobenzene	108	80-120	%REC	1	12/17/2013 2:05:27 PM	10811
EPA METHOD 300.0: ANIONS					Analyst	JRR
Chloride	ND	30	mg/Kg	20	12/16/2013 2:42:55 PM	10813

Matrix: SOIL

Sidewall immediately North of PxA marker sampled to confirm excavation closure.

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 for VOA and TOC only.
- RL Reporting Detection Limit

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1312620

19-Dec-13

Client:

Blagg Engineering

Project:

Florance 100

Sample ID MB-10813

SampType: MBLK

TestCode: EPA Method 300.0: Anions

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 10813

RunNo: 15549

Prep Date: 12/16/2013

Sample ID LCS-10813

LCSS

Analysis Date: 12/16/2013

SeqNo: 447221

Units: mg/Kg

**RPDLimit** 

Qual

Analyte

Result

PQL 1.5

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD

Chloride

ND

SampType: LCS

Batch ID: 10813

PQL

1.5

RunNo: 15549

Prep Date:

Client ID:

12/16/2013

Analysis Date: 12/16/2013

SeqNo: 447222

Units: mg/Kg

Analyte

Result

SPK value SPK Ref Val %REC LowLimit

91.6

HighLimit

**RPDLimit** 

Qual

Chloride

15.00

14

%RPD

Qualifiers:

Value exceeds Maximum Contaminant Level.

F Value above quantitation range

Analyte detected below quantitation limits

RSD is greater than RSDlimit 0

R RPD outside accepted recovery limits В 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 6

Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit

Spike Recovery outside accepted recovery limits

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1312620

19-Dec-13

Client:

Blagg Engineering

Project: Floranc	e 100	
Sample ID MB-10798	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 10798	RunNo: 15536
Prep Date: 12/16/2013	Analysis Date: 12/17/2013	SeqNo: 447068 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10	
Surr: DNOP	8.4 10.00	84.0 66 131
Sample ID LCS-10798	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: LCSS	Batch ID: 10798	RunNo: 15536
Prep Date: 12/16/2013	Analysis Date: 12/17/2013	SeqNo: 447085 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	61 10 50.00	0 123 62.1 127
Surr: DNOP	5.3 5.000	106 66 131
Sample ID MB-10815	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 10815	RunNo: 15536
Prep Date: 12/16/2013	Analysis Date: 12/17/2013	SeqNo: 448012 Units: %REC
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	8.5 10.00	85.1 66 131
Sample ID LCS-10815	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: LCSS	Batch ID: 10815	RunNo: 15536
Prep Date: 12/16/2013	Analysis Date: 12/17/2013	SeqNo: 448013 Units: %REC
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	4.4 5.000	. 88.5 66 131

#### 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 R
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded H
- Not Detected at the Reporting Limit ND
- Sample pH greater than 2 for VOA and TOC only.
- Reporting Detection Limit

Page 4 of 6

### Hall Environmental Analysis Laboratory, Inc.

27

1000

5.0

25.00

1000

WO#:

1312620

19-Dec-13

Client:

Blagg Engineering

Project:

Gasoline Range Organics (GRO)

Surr: BFB

Florance 100

Sample ID MB-10811	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range										
Client ID: PBS	Batch ID: 10811	RunNo: 15571										
Prep Date: 12/16/2013	Analysis Date: 12/17/2013	SeqNo: 448155	Units: mg/Kg									
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual									
Gasoline Range Organics (GRO)	ND 5.0											
Surr: BFB	930 1000	93.3 74.5	129									
Sample ID LCS-10811	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Range									
Client ID: LCSS	Batch ID: 10811	RunNo: 15571	,									
Prep Date: 12/16/2013	Analysis Date: 12/17/2013	SeqNo: 448156	Units: mg/Kg									
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual									

0

106

101

74.5

74.5

126

129

#### 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 5 of 6

- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1312620

19-Dec-13

Client:

Blagg Engineering

Project:

Florance 100

Sample ID MB-10811	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batch	ID: 10	811	F	RunNo: 1	5571				
Prep Date: 12/16/2013	Analysis D	ate: 12	2/17/2013	S	SeqNo: 4	48181	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		108	80	120			
Sample ID LCS-10811	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batch	D: 10	811	F	RunNo: 1	5571				
Prep Date: 12/16/2013	Analysis D	ate: 12	2/17/2013	5	SeqNo: 4	48182	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.050	1.000	0	98.5	80	120			
Toluene	0.95	0.050	1.000	0	94.8	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.1	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.1	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - P Sample pH greater than 2 for VOA and TOC only.
- 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: B	BLAGG	Work Order Number: 1312620							RcptNo: 1									
Received by/date:																		
Logged By:	Anne Thorne		12/14/20	0 AM		anne	Am	_										
Completed By:	Anne Thorne	ne /12/16/2013					ame	Am	_									
Reviewed By:	ws	17/1/01	/3															
Chain of Custo	ody	1914																
1. Custody seals	intact on sam	ple bottles?			Yes		No		Not Present									
2. Is Chain of Cus	stody complet	e?			Yes	<b>V</b>	No		Not Present									
3. How was the sa	w was the sample delivered?																	
Log In																		
4. Was an attemp	pt made to co	ol the samples	?		Yes	<b>V</b>	No		NA 🗆									
5. Were all sample	les received a	it a temperature	of >0° C	to 6.0°C	Yes	<b>V</b>	No		NA 🗆									
6. Sample(s) in p	proper contain	er(s)?			Yes	<b>V</b>	No											
7. Sufficient samp		Yes	V	No														
8, Are samples (e	except VOA ar	nd ONG) prope	rly preserve	ed?	Yes	<b>V</b>	No											
9. Was preservati	tive added to b	oottles?			Yes		No	<b>~</b>	NA 🗆									
10.VOA vials have zero headspace?							No		No VOA Vials									
11. Were any sam		Yes		No	<b>V</b>	# -5												
								_	# of preserved bottles checked									
12. Does paperwork		Yes	<b>V</b>	No		for pH:	or >12 unless noted)											
(Note discrepancies on chain of custody)  13. Are matrices correctly identified on Chain of Custody?						<b>V</b>	No		Adjusted?	n v 12 dilloco liotody								
14. Is it clear what analyses were requested?						<b>V</b>	No											
15. Were all holding times able to be met?						<b>V</b>	No		Checked by:									
(If no, notify cu	ustomer for au	thorization.)						,L										
Special Handlin						Ċ												
16. Was client not	ified of all disc	repancies with	this order?	4	Yes		No	Ш	NA 🗹	- ·								
Person N	Notified:	The course and a fine on one other one for a		Date														
By Whor	-	A		Via:	☐ eMa	il _	Phone _	Fax	☐ In Person	0.8								
Regardin	-																	
Client Ins	structions:			<del>,</del>														
17. Additional rem	narks:																	
18. Cooler Inform	The second secon																	
			eal Intact	Seal No.	↑ Seal Da	ite 🐬	Signed B	y - 3										
1	1.0	Good Ye	S															

Chain-of-Custody Record  Client: BLAGE ENGINEERWS INC.			Turn-Around Time: By WED 12/18/2013  □ Standard Kush				HALL ENVIRONMENTAL ANALYSIS LABORATORY															
																			BP AMERICA  Mailing Address: P.O. Box 97  BLOWMFIELD NM 97413  Phone #: 505-632-1199		Project Name:  FLORANCE 100  Project #:	
4901 Hawkins NE - Albuquerque, NM 87109																						
	Te	l. 50	5-34	5-39	975	F	ax	505-	345-	4107	7											
					A	naly	sis	Req	uest													
email or Fax#:			Project Manager:					ly)	9					)4)								
QA/QC Package:  Standard   Level 4 (Full Validation)			J. BLAGE				王TMB's (8021)	+ TPH (Gas only)	DRO / MRO			SIMS)		,PO4,SC	PCB's							
Accreditation			Sampler: J. Bullet					PH	D	7	=	8270		102	3082						9	
□ NELAP □ Other			On fee XI Yes  No				14	+	8	18.	90	82	(D	03,1	8/8		(A)	1. /			or A	
□ EDD (Type)		Sample Temperature:				MTBE	BE	(G	po v	po g	0	etal	N,	side	F	>-	106			2		
Date	Time	Matrix	Sample Request ID		Preservative Type	Constitution of the second	il No	BTEX + MA	BTEX + MTBE	TPH 8015B (GRO	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> ,SO <sub>4</sub> )	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	CHLUSEIBE	;		Air Bubbles (Y or N)
12/13	1425	Soil	5-pt 8-28'	402x1	CeroL		-401	×		X		,							X			
13/13	1316	И	WEST WALL N OF WILL 5-pt B'-ZE' WALL N OF WELL 5-pt B'-ZB	H	u.	*	-002	×		×									x			
			,					-														
																			-	$\perp$		$\perp$
											$\perp$		_									
											_									_		
											_									_	_	
								-			_		_						$\blacksquare$	$\dashv$	+	1
										-	-		$\dashv$						$\rightarrow$	$\dashv$	+	+
								$\vdash$		$\dashv$	$\dashv$	$\dashv$	$\dashv$						$\dashv$	$\dashv$	+	+
											1									$\dashv$	+	+
Date: Time: Relinquished by:  13/13 1430 Jeff Blogg		Received by:  Date Time  12/3/13 1430				Remarks: BILL BP  PAPER: ZFEIRKOSJS																
Date: Time: Relinquished by:		Received by: Date Time				cartest: JEFF PEACE																
2/14/13 1630 / Modelle Walle Environmental may be subc			Ma	1/2	114/13	(133	100															
П	necessary,	sallibles subi	milited to Hall Environmental may be subc	ontracted to other ac	scredited laboratorie	s. This serves	as notice of this	possil	ollity. A	any su	b-contr	racted	data	will be	clear	y nota	ted on	the ar	nalytica	ri repor	t.	