

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

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

OIL CONS. DIV DIST. 3

JUL 20 2017

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

Form C-141  
Revised August 8, 2011

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report


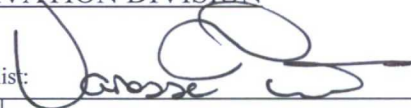
Name of Company: BP	Contact: Steve Moskal	
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9497	
Facility Name: Florance GC D 004A	Facility Type: Natural gas well	
Surface Owner: Federal	Mineral Owner: Federal	API No. 3004522147

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County: San Juan
C	10	33N	09W	1,080	North	1,605	West	

Latitude 36.83008° Longitude -107.77145°

NATURE OF RELEASE

Type of Release: Produced water, oil and condensate	Volume of Release: unknown	Volume Recovered: none
Source of Release: Unknown – Impacts discovered beneath 95 bbl BGT	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: October 4, 2016; 12:30PM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom? Steve Moskal	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* During construction operations to replace the onsite BGTs impacted soil was discovered below the tank. The impacted soil was excavated and treated on site via soil shredding.		
Describe Area Affected and Cleanup Action Taken.* The extents of the remedial excavation measured approximately 70'x90'x27' deep. The sandstone base of the excavation exceeded the closure standard of 1,000. Approximately 275 gallons of 35% hydrogen peroxide solution was applied to the base prior to backfill and was pre-approved by the NMOCD and BLM. A total of 4,065 cubic yards of soil was treated on site. Attached is documentation of the activities.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Steve Moskal	Approved by Environmental Specialist: 	
Title: Field Environmental Coordinator	Approval Date: 8/10/2017	Expiration Date:
E-mail Address: steven.moskal@bp.com	Conditions of Approval: —	Attached <input type="checkbox"/>
Date: July 20, 2017	Phone: 505-326-9497	

\* Attach Additional Sheets If Necessary

OIL CONS. DIV DIST. 3

JUL 20 2017

NRF1707338055

75

BP America  
Florance GC D 4A  
(C) Sec 10 – T30N – R9W  
San Juan County, New Mexico  
API: 30-045-22147

Summary Record of Impact Remediation

October 4, 2016 Soils impacted with hydrocarbons encountered during removal of a 95 barrel BGT. Initial laboratory analysis of a composite sample of soil collected below the tank (6' below grade) tested total TPH at 5,270 mg/Kg.

Site Closure Standard Determined at 1,000 ppm TPH based on:

Depth to Groundwater based on BGT permit research > 100 feet (0 points)  
Distance to water well > 1,000' based on BGT permit research (0 points)  
Distance to dry wash < 1,000' based on site measurements (10 points)

Total Site Ranking: 10

April 26, 2017 Begin site remediation via excavation at 95 BGT center. Prepare to treat impacted material on-site via soil shredding and chemical treatment.

May 1, 2017 Conduct witnessed sampling of Northwest and West sidewalls for closure.

May 4, 2017 Conduct witnessed sampling of Northeast, South and East sidewalls and base for closure. Excavation base on dense sandstone. Apply 275 gallons of 35% hydrogen peroxide to sandstone base. Sample 10 x 100 CY, 1 x 442 CY, 1 x 412 CY and 1 x 411CY treated soil piles for closure.

May 9, 2017 Sample 3 x 500 CY treated soil piles for closure.

May 11, 2017 Sample 2 x 300 CY treated soil piles for closure.

May 19, 2012 Complete backfilling of excavation. Final base of excavation approximately 55' x 35' x 27' deep (from original wellpad surface grade), with top perimeter of excavation approximately 90' x 70' with sloping to accommodate safe excavation practices.

Source Area Sample  
May 1, 2017  
Base @ 26', TPH = 1,850 ppm

Closure Samples  
May 1, 2017  
1 - North Wall, West Side  
(TPH = 0.0 ppm)

2 - West Wall  
(TPH = 0.0 ppm)

Closure Samples  
May 4, 2017

3 - South Wall  
(TPH = ND)

4 - East Wall  
(TPH = ND)

5 - North Wall, East Side  
(TPH = ND)

6 - South Base (Impacted @ 25')  
(TPH = 1,800 ppm)

7 - South South Base (Tan @ 25')  
(TPH = ND)

Approximate Outer Perimeter  
of Sloped Excavation

Excavation Base @ 25' +/-

Excavation Base @ 27' +/-

Florance GC D 4A

May 4, 2017  
Apply 275 gallons of 35%  
hydrogen peroxide to residual  
impacted base sandstone  
surface @ -25' to -27' prior to  
backfilling with clean soil

Florance GC D 4A

(C) Sec 10 - T30N - R9W

API: 30-045-22147

May 5, 2017

Google earth

© 2018 Google

100 ft

N

Summary laboratory data from witnessed site sampling:

Sample ID	Date	TPH Total (mg/Kg)	BTEX Total (mg/Kg)	Benzene (mg/Kg)	Comments
Base Grab @ -26'	5/1/2017	1,850	15.1	ND	On Dense Sandstone Surface
1 – North Wall (west) (5-pt. comp) (4'-20')	5/1/2017	ND	ND	ND	
2 – West Wall (5- pt. comp) (4'-20')	5/1/2017	ND	ND	ND	
3 – South Wall (7-pt. comp) (10'-24')	5/4/2017	ND	ND	ND	
4 – East Wall (5-pt. comp)(10'-24')	5/4/2017	ND	ND	ND	
5 – North Wall (east) (5-pt. comp)(10'-24')	5/4/2017	ND	ND	ND	
6 – South Base @ 25' (5-pt. comp)	5/4/2017	1,800	3.61	ND	Residual impacts on sandstone surface treated with 275 gallons 35% peroxide
7 – South South Base @ 25' (5-pt. comp)	5/4/2017	ND	ND	ND	
NMOCD/BLM Closure Standard		1,000	50	10	

BP America  
 Florance GC D 4A  
 (C) Sec 10 – T30N – R9W  
 San Juan County, New Mexico  
 API: 30-045-22147

Treated Soil Pile Test Results  
 May 11, 2017

Pile ID	Volume (CY)	Date Created	Date Sampled	Field OVM (ppm)	BTEX (mg/Kg)	TPH GRO (mg/Kg)	TPH DRO (mg/Kg)	TPH MRO (mg/Kg)	TPH Total (mg/Kg)	Chloride (mg/Kg)
TSP-1	100	5/2/2017	5/4/2017	19.9	ND	112	180	120	412	ND
TSP-2	100	5/2/2017	5/4/2017	33.5	0.49	32	150	110	292	ND
TSP-3	100	5/2/2017	5/4/2017	22.0	ND	21	110	99	230	ND
TSP-4	100	5/2/2017	5/4/2017	23.2	ND	27	190	140	357	ND
TSP-5	100	5/2/2017	5/4/2017	22.6	ND	18	98	79	195	ND
TSP-6	100	5/2/2017	5/4/2017	21.4	ND	21	440	300	761	ND
TSP-7	100	5/2/2017	5/4/2017	29.6	ND	33	640	420	1,093	ND
TSP-8	100	5/2/2017	5/4/2017	36.7	ND	32	490	340	862	ND
TSP-9	100	5/2/2017	5/4/2017	33.2	ND	30	470	330	830	ND
TSP-10	100	5/2/2017	5/4/2017	52.2	ND	22	380	290	692	ND
TSP-11	442	5/2/2017	5/4/2017	69.0	ND	44	620	480	1,144	ND
TSP-12	412	5/3/2017	5/4/2017	28.6	ND	28	370	280	678	ND
TSP-13	411	5/3/2017	5/4/2017	44.3	ND	28	570	430	1,028	ND
TSP-14	500	5/8/2017	5/9/2017	19.5	ND	ND	120	110	230	ND
TSP-15	500	5/8/2017	5/9/2017	11.6	ND	ND	120	100	220	ND
TSP-16	500	5/9/2017	5/9/2017	24.5	ND	ND	81	65	146	ND
TSP-17	300	5/9/2017	5/11/2017	7.8	ND	9.3	43	ND	52.3	ND
TSP-18	300	5/9-10/2017	5/11/2017	8.6	ND	11	85	61	157	ND

Site Closure Standard = 1,000 ppm total TPH

Variance approved by regulatory agencies on TSP-7, TSP-11 and TSP-13

Excavation Closure  
Laboratory Reports



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

May 03, 2017

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

RE: Florance GC D 4A

OrderNo.: 1705065

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 3 sample(s) on 5/2/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", with a stylized flourish at the end.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1705065

Date Reported: 5/3/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: North Wall - West Side 5-Point

Project: Florance GC D 4A

Collection Date: 5/1/2017 12:04:00 PM

Lab ID: 1705065-001

Matrix: MEOH (SOIL)

Received Date: 5/2/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/2/2017 10:35:57 AM	31522
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/2/2017 9:18:45 AM	31516
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/2/2017 9:18:45 AM	31516
Surr: DNOP	112	70-130		%Rec	1	5/2/2017 9:18:45 AM	31516
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	5/2/2017 9:26:52 AM	31507
Surr: BFB	103	54-150		%Rec	1	5/2/2017 9:26:52 AM	31507
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	5/2/2017 9:26:52 AM	31507
Toluene	ND	0.038		mg/Kg	1	5/2/2017 9:26:52 AM	31507
Ethylbenzene	ND	0.038		mg/Kg	1	5/2/2017 9:26:52 AM	31507
Xylenes, Total	ND	0.076		mg/Kg	1	5/2/2017 9:26:52 AM	31507
Surr: 4-Bromofluorobenzene	122	66.6-132		%Rec	1	5/2/2017 9:26:52 AM	31507

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1705065

Date Reported: 5/3/2017

CLIENT: Blagg Engineering

Client Sample ID: West Wall 5-Point

Project: Florance GC D 4A

Collection Date: 5/1/2017 12:08:00 PM

Lab ID: 1705065-002

Matrix: MEOH (SOIL)

Received Date: 5/2/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/2/2017 10:48:21 AM	31522
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/2/2017 10:02:26 AM	31516
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/2/2017 10:02:26 AM	31516
Surr: DNOP	111	70-130		%Rec	1	5/2/2017 10:02:26 AM	31516
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	5/2/2017 9:50:44 AM	31507
Surr: BFB	98.4	54-150		%Rec	1	5/2/2017 9:50:44 AM	31507
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	5/2/2017 9:50:44 AM	31507
Toluene	ND	0.034		mg/Kg	1	5/2/2017 9:50:44 AM	31507
Ethylbenzene	ND	0.034		mg/Kg	1	5/2/2017 9:50:44 AM	31507
Xylenes, Total	ND	0.068		mg/Kg	1	5/2/2017 9:50:44 AM	31507
Surr: 4-Bromofluorobenzene	116	66.6-132		%Rec	1	5/2/2017 9:50:44 AM	31507

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1705065

Date Reported: 5/3/2017

CLIENT: Blagg Engineering

Client Sample ID: Base @ 26'

Project: Florance GC D 4A

Collection Date: 5/1/2017 12:35:00 PM

Lab ID: 1705065-003

Matrix: MEOH (SOIL)

Received Date: 5/2/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/2/2017 11:00:45 AM	31522
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	1100	49		mg/Kg	5	5/2/2017 10:49:54 AM	31516
Motor Oil Range Organics (MRO)	430	240		mg/Kg	5	5/2/2017 10:49:54 AM	31516
Surr: DNOP	106	70-130		%Rec	5	5/2/2017 10:49:54 AM	31516
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	320	19		mg/Kg	5	5/2/2017 10:14:37 AM	31507
Surr: BFB	737	54-150	S	%Rec	5	5/2/2017 10:14:37 AM	31507
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.094		mg/Kg	5	5/2/2017 10:14:37 AM	31507
Toluene	ND	0.19		mg/Kg	5	5/2/2017 10:14:37 AM	31507
Ethylbenzene	1.1	0.19		mg/Kg	5	5/2/2017 10:14:37 AM	31507
Xylenes, Total	14	0.37		mg/Kg	5	5/2/2017 10:14:37 AM	31507
Surr: 4-Bromofluorobenzene	145	66.6-132	S	%Rec	5	5/2/2017 10:14:37 AM	31507

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705065

03-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	MB-31522	SampType: mblk			TestCode: EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID: 31522			RunNo: 42488					
Prep Date:	5/2/2017	Analysis Date: 5/2/2017			SeqNo: 1336569		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31522	SampType: lcs			TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID: 31522			RunNo: 42488					
Prep Date:	5/2/2017	Analysis Date: 5/2/2017			SeqNo: 1336570		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.4	90	110			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705065

03-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	MB-31516	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	31516	RunNo:	42482					
Prep Date:	5/2/2017	Analysis Date:	5/2/2017	SeqNo:	1335875	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		109	70	130			

Sample ID	LCS-31516	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	31516	RunNo:	42482					
Prep Date:	5/2/2017	Analysis Date:	5/2/2017	SeqNo:	1335876	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.4	63.8	116			
Surr: DNOP	4.5		5.000		89.4	70	130			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705065

03-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	MB-31507	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31507	RunNo:	42487					
Prep Date:	5/1/2017	Analysis Date:	5/2/2017	SeqNo:	1336368	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	1000		1000		101	54	150			

Sample ID	LCS-31507	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31507	RunNo:	42487					
Prep Date:	5/1/2017	Analysis Date:	5/2/2017	SeqNo:	1336369	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	96.9	76.4	125			
Surr: BFB	1100		1000		113	54	150			

## Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1705065

03-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	<b>MB-31507</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>31507</b>		RunNo:	<b>42487</b>			
Prep Date:	<b>5/1/2017</b>		Analysis Date:	<b>5/2/2017</b>		SeqNo:	<b>1336375</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		118	66.6	132			

Sample ID	<b>LCS-31507</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>31507</b>		RunNo:	<b>42487</b>			
Prep Date:	<b>5/1/2017</b>		Analysis Date:	<b>5/2/2017</b>		SeqNo:	<b>1336376</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	98.9	80	120			
Toluene	0.99	0.050	1.000	0	99.1	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.3	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.3		1.000		125	66.6	132			

Sample ID	<b>1705065-001AMS</b>		SampType:	<b>MS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>North Wall - West Si</b>		Batch ID:	<b>31507</b>		RunNo:	<b>42487</b>			
Prep Date:			Analysis Date:	<b>5/2/2017</b>		SeqNo:	<b>1336377</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.71	0.019	0.7559	0	94.1	61.5	138			
Toluene	0.73	0.038	0.7559	0	95.9	71.4	127			
Ethylbenzene	0.74	0.038	0.7559	0	98.3	70.9	132			
Xylenes, Total	2.3	0.076	2.268	0	100	76.2	123			
Surr: 4-Bromofluorobenzene	0.93		0.7559		124	66.6	132			

Sample ID	<b>1705065-001AMSD</b>		SampType:	<b>MSD</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>North Wall - West Si</b>		Batch ID:	<b>31507</b>		RunNo:	<b>42487</b>			
Prep Date:			Analysis Date:	<b>5/2/2017</b>		SeqNo:	<b>1336378</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.69	0.019	0.7559	0	91.1	61.5	138	3.24	20	
Toluene	0.71	0.038	0.7559	0	93.4	71.4	127	2.72	20	
Ethylbenzene	0.72	0.038	0.7559	0	95.6	70.9	132	2.85	20	
Xylenes, Total	2.2	0.076	2.268	0	96.9	76.2	123	3.50	20	
Surr: 4-Bromofluorobenzene	0.90		0.7559		119	66.6	132	0	0	

### Qualifiers:

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



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

## Sample Log-In Check List

Client Name: **BLAGG**

Work Order Number: **1705065**

RcptNo: **1**

Received By: **Sophia Campuzano**

5/2/2017 8:00:00 AM

*Sophia Campuzano*

Completed By: **Andy Jansson**

5/2/2017 8:21:52 AM

*Andy Jansson*

Reviewed By: **ENM**

05/02/17

### Chain of Custody

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

### Log In

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

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

### Special Handling (if applicable)

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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			

Chain-of-Custody Record		Turn-Around Time: <u>SAME DAY</u>	
Client: <u>BP America</u>		<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	
<u>Blagg Engineering Inc.</u>		Project Name: <u>FLORANCE GC D 4A</u>	
Mailing Address:		Project #:	
Phone #: <u>(505) 320-1183</u>		Project Manager: <u>J. Blagg</u>	
email or Fax#:		QA/QC Package:	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		Sampler: <u>J. Blagg</u>	
Accreditation		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		Sample Temperature: <u>4.3</u>	
<input type="checkbox"/> EDD (Type) _____			

**Turn-Around Time:**

SAME DAY

☐ Standard ☒ Rush

Project Name:

FLORANCE GC D 4A

Project #:

**Project Manager:**

I BLAKE

**Sampler:**

J. Blacy

On Ice

☒ Yes

No

Sample Temperature: 4.3

[illegible]

Date: 5/1/17	Time: 1500	Relinquished by: Jeff Blegg	Received by: Christa Warren	Date: 5/1/17	Time: 1500
Date: 5/1/17	Time: 1806	Relinquished by: Christine Warren	Received by: Sophie Coen	Date: 05/02/17	Time: 0800

Remarks: Bill BP Contact: Steve Morkal  
VID: VH1K09VRYM  
WBS Element: L9-0018M-E: 22147



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

May 09, 2017

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

RE: Florance GC D 4A

OrderNo.: 1705311

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 10 sample(s) on 5/5/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1705311

Date Reported: 5/9/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: South Base @ 25'

Project: Florance GC D 4A

Collection Date: 5/4/2017 12:25:00 PM

Lab ID: 1705311-001

Matrix: MEOH (SOIL)

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 11:07:55 AM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	1100	47		mg/Kg	5	5/5/2017 3:59:51 PM	31585
Motor Oil Range Organics (MRO)	560	240		mg/Kg	5	5/5/2017 3:59:51 PM	31585
Surr: DNOP	108	70-130		%Rec	5	5/5/2017 3:59:51 PM	31585
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	140	20		mg/Kg	5	5/5/2017 9:22:30 AM	G42579
Surr: BFB	340	54-150	S	%Rec	5	5/5/2017 9:22:30 AM	G42579
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.10		mg/Kg	5	5/5/2017 9:22:30 AM	B42579
Toluene	ND	0.20		mg/Kg	5	5/5/2017 9:22:30 AM	B42579
Ethylbenzene	0.41	0.20		mg/Kg	5	5/5/2017 9:22:30 AM	B42579
Xylenes, Total	3.2	0.41		mg/Kg	5	5/5/2017 9:22:30 AM	B42579
Surr: 4-Bromofluorobenzene	126	66.6-132		%Rec	5	5/5/2017 9:22:30 AM	B42579

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1705311

Date Reported: 5/9/2017

CLIENT: Blagg Engineering

Client Sample ID: South South Base (Tan) @ 25'

Project: Florance GC D 4A

Collection Date: 5/4/2017 12:28:00 PM

Lab ID: 1705311-002

Matrix: MEOH (SOIL)

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 11:20:20 AM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/5/2017 2:09:12 PM	31585
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/5/2017 2:09:12 PM	31585
Surr: DNOP	105	70-130		%Rec	1	5/5/2017 2:09:12 PM	31585
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	5/5/2017 9:46:34 AM	G42579
Surr: BFB	95.3	54-150		%Rec	1	5/5/2017 9:46:34 AM	G42579
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	5/5/2017 9:46:34 AM	B42579
Toluene	ND	0.036		mg/Kg	1	5/5/2017 9:46:34 AM	B42579
Ethylbenzene	ND	0.036		mg/Kg	1	5/5/2017 9:46:34 AM	B42579
Xylenes, Total	ND	0.072		mg/Kg	1	5/5/2017 9:46:34 AM	B42579
Surr: 4-Bromofluorobenzene	114	66.6-132		%Rec	1	5/5/2017 9:46:34 AM	B42579

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

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

## Analytical Report

Lab Order 1705311

Date Reported: 5/9/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: South Sidewall 7-pt

Project: Florance GC D 4A

Collection Date: 5/4/2017 12:34:00 PM

Lab ID: 1705311-003

Matrix: MEOH (SOIL)

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 11:32:45 AM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/5/2017 2:31:03 PM	31585
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/5/2017 2:31:03 PM	31585
Surr: DNOP	105	70-130		%Rec	1	5/5/2017 2:31:03 PM	31585
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	5/5/2017 10:10:36 AM	G42579
Surr: BFB	95.8	54-150		%Rec	1	5/5/2017 10:10:36 AM	G42579
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	5/5/2017 10:10:36 AM	B42579
Toluene	ND	0.040		mg/Kg	1	5/5/2017 10:10:36 AM	B42579
Ethylbenzene	ND	0.040		mg/Kg	1	5/5/2017 10:10:36 AM	B42579
Xylenes, Total	ND	0.080		mg/Kg	1	5/5/2017 10:10:36 AM	B42579
Surr: 4-Bromofluorobenzene	112	66.6-132		%Rec	1	5/5/2017 10:10:36 AM	B42579

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

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

## Analytical Report

Lab Order 1705311

Date Reported: 5/9/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Sidewall 5-pt

Project: Florance GC D 4A

Collection Date: 5/4/2017 12:40:00 PM

Lab ID: 1705311-004

Matrix: MEOH (SOIL)

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	40	30		mg/Kg	20	5/5/2017 11:45:09 AM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/5/2017 2:53:21 PM	31585
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/5/2017 2:53:21 PM	31585
Surr: DNOP	106	70-130		%Rec	1	5/5/2017 2:53:21 PM	31585
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	5/5/2017 10:34:38 AM	G42579
Surr: BFB	101	54-150		%Rec	1	5/5/2017 10:34:38 AM	G42579
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	5/5/2017 10:34:38 AM	B42579
Toluene	ND	0.041		mg/Kg	1	5/5/2017 10:34:38 AM	B42579
Ethylbenzene	ND	0.041		mg/Kg	1	5/5/2017 10:34:38 AM	B42579
Xylenes, Total	ND	0.082		mg/Kg	1	5/5/2017 10:34:38 AM	B42579
Surr: 4-Bromofluorobenzene	112	66.6-132		%Rec	1	5/5/2017 10:34:38 AM	B42579

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

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

## Analytical Report

Lab Order 1705311

Date Reported: 5/9/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: North Sidewall (East) 5-pt

Project: Florance GC D 4A

Collection Date: 5/4/2017 12:46:00 PM

Lab ID: 1705311-005

Matrix: MEOH (SOIL)

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 11:57:34 AM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/5/2017 3:15:28 PM	31585
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/5/2017 3:15:28 PM	31585
Surr: DNOP	108	70-130		%Rec	1	5/5/2017 3:15:28 PM	31585
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	5/5/2017 10:58:31 AM	G42579
Surr: BFB	98.6	54-150		%Rec	1	5/5/2017 10:58:31 AM	G42579
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	5/5/2017 10:58:31 AM	B42579
Toluene	ND	0.041		mg/Kg	1	5/5/2017 10:58:31 AM	B42579
Ethylbenzene	ND	0.041		mg/Kg	1	5/5/2017 10:58:31 AM	B42579
Xylenes, Total	ND	0.082		mg/Kg	1	5/5/2017 10:58:31 AM	B42579
Surr: 4-Bromofluorobenzene	115	66.6-132		%Rec	1	5/5/2017 10:58:31 AM	B42579

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705311

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	MB-31588	SampType: mblk			TestCode: EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID: 31588			RunNo: 42592					
Prep Date:	5/5/2017	Analysis Date: 5/5/2017			SeqNo: 1339643		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31588	SampType: lcs			TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID: 31588			RunNo: 42592					
Prep Date:	5/5/2017	Analysis Date: 5/5/2017			SeqNo: 1339644		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.5	90	110			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705311

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	LCS-31585		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 31585		RunNo: 42570					
Prep Date:	5/5/2017		Analysis Date: 5/5/2017		SeqNo: 1339186		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.1	63.8	116			
Surr: DNOP	4.8		5.000		96.5	70	130			

Sample ID	MB-31585	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 31585			RunNo: 42570					
Prep Date:	5/5/2017	Analysis Date: 5/5/2017			SeqNo: 1339187		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	70	130			

## Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1705311

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339451	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	980		1000		98.3	54	150			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339452	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	96.8	76.4	125			
Surr: BFB	1100		1000		114	54	150			

Sample ID	1705311-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	South South Base (	Batch ID:	G42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339453	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.6	18.10	0	101	61.3	150			
Surr: BFB	840		724.1		116	54	150			

Sample ID	1705311-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	South South Base (	Batch ID:	G42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339454	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.6	18.10	0	97.0	61.3	150	3.80	20	
Surr: BFB	800		724.1		111	54	150	0	0	

### Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705311

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339464	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		117	66.6	132			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339465	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.1	80	120			
Toluene	0.95	0.050	1.000	0	95.4	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.1	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.4	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		121	66.6	132			

Sample ID	1705311-003AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	South Sidewall 7-pt	Batch ID:	B42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339466	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.76	0.020	0.8006	0	94.4	61.5	138			
Toluene	0.77	0.040	0.8006	0	96.2	71.4	127			
Ethylbenzene	0.79	0.040	0.8006	0	98.8	70.9	132			
Xylenes, Total	2.4	0.080	2.402	0	101	76.2	123			
Surr: 4-Bromofluorobenzene	0.96		0.8006		120	66.6	132			

Sample ID	1705311-003AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	South Sidewall 7-pt	Batch ID:	B42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339467	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.020	0.8006	0	92.3	61.5	138	2.23	20	
Toluene	0.76	0.040	0.8006	0	94.7	71.4	127	1.56	20	
Ethylbenzene	0.78	0.040	0.8006	0	97.1	70.9	132	1.65	20	
Xylenes, Total	2.4	0.080	2.402	0	98.4	76.2	123	2.48	20	
Surr: 4-Bromofluorobenzene	0.94		0.8006		118	66.6	132	0	0	

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



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: 1705311

RcptNo: .1

Received By: Ashley Gallegos 5/5/2017 6:45:00 AM

Completed By: Ashley Gallegos 5/5/2017 7:06:45 AM

Reviewed By: *SPC* *ARG* 05/05/17

### Chain of Custody

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

### Log In

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

### Special Handling (if applicable)

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

Person Notified:

Date

By Whom:

Via:

eMail

Phone

Fax

In Person

Regarding:

Client Instructions:

17. Additional remarks:

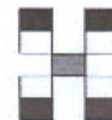
### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

# Chain-of-Custody Record

Client: **BP AMERICA**  
**BLAGG ENGINEERING INC.**  
Mailing Address:  
Phone #: **(505) 320-1183**  
email or Fax#:  
QA/QC Package:  
☒ Standard ☐ Level 4 (Full Validation)  
Accreditation  
☐ NELAP ☐ Other \_\_\_\_\_  
☐ EDD (Type) \_\_\_\_\_

Turn-Around Time: **SAME DAY**  
☐ Standard ☒ Rush  
Project Name:  
**FLORANCE GC D 4A**  
Project #:  
Project Manager:  
**J. Blagg**  
Sampler: **J. Blagg**  
On Ice: ☒ Yes ☐ No  
Sample Temperature: **1.3-0.1 = 1.2**



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + THPs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE	Air Bubbles (Y or N)
5/4/17	1225	Soil	South Base @ 25'	402 x 1	COOL	-001	X	X										X	
	1228		South South Base (Tan) @ 25'			-002													
	1234		South Sidewall 7-pb			-003													
	1240		East Sidewall 5-pb			-004													
	1246		North Sidewall (East) 5-pb			-005													
	1140		TSP-1			-006													
	1143		TSP-2			-007													
	1146		TSP-3			-008													
	1148		TSP-4			-009													
	1150		TSP-5			-010													

Date: 5/4/17 Time: 1925 Relinquished by: **Jeff Blagg** Received by: **Christi Wertz** Date: 5/4/17 Time: 1925  
Remarks: **Bill BP** CONTACT: **STEVE MORGAN**  
**VID: VHIX0NEVRM**  
**WBS ELEMENT: L1-0018M-E: 22147**  
Date: 5/4/17 Time: 2037 Relinquished by: **Christi Wertz** Received by: **Asheley D. Galligan** Date: 05/05/17 Time: 0445  
**TSP**  
**5 SAMPLES TREATED WITH H<sub>2</sub>O<sub>2</sub>**

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

Treated Soil Pile  
Laboratory Closure Reports



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

May 09, 2017

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

RE: Florance GC D 4A

OrderNo.: 1705311

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 10 sample(s) on 5/5/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1705311

Date Reported: 5/9/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-1

Project: Florance GC D 4A

Collection Date: 5/4/2017 11:40:00 AM

Lab ID: 1705311-006

Matrix: MEOH (SOIL)

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 12:09:58 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	180	9.3		mg/Kg	1	5/5/2017 3:37:52 PM	31585
Motor Oil Range Organics (MRO)	120	47		mg/Kg	1	5/5/2017 3:37:52 PM	31585
Surr: DNOP	110	70-130		%Rec	1	5/5/2017 3:37:52 PM	31585
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	12	10		mg/Kg	5	5/5/2017 11:22:27 AM	G42579
Surr: BFB	169	54-150	S	%Rec	5	5/5/2017 11:22:27 AM	G42579
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.051		mg/Kg	5	5/5/2017 11:22:27 AM	B42579
Toluene	ND	0.10		mg/Kg	5	5/5/2017 11:22:27 AM	B42579
Ethylbenzene	ND	0.10		mg/Kg	5	5/5/2017 11:22:27 AM	B42579
Xylenes, Total	ND	0.20		mg/Kg	5	5/5/2017 11:22:27 AM	B42579
Surr: 4-Bromofluorobenzene	117	66.6-132		%Rec	5	5/5/2017 11:22:27 AM	B42579

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1705311

Date Reported: 5/9/2017

CLIENT: Blagg Engineering

Client Sample ID: TSP-2

Project: Florance GC D 4A

Collection Date: 5/4/2017 11:43:00 AM

Lab ID: 1705311-007

Matrix: MEOH (SOIL)

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 12:47:10 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	150	9.3		mg/Kg	1	5/5/2017 3:03:38 PM	31585
Motor Oil Range Organics (MRO)	110	47		mg/Kg	1	5/5/2017 3:03:38 PM	31585
Surr: DNOP	88.2	70-130		%Rec	1	5/5/2017 3:03:38 PM	31585
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	32	17		mg/Kg	5	5/5/2017 11:46:21 AM	G42579
Surr: BFB	195	54-150	S	%Rec	5	5/5/2017 11:46:21 AM	G42579
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.087		mg/Kg	5	5/5/2017 11:46:21 AM	B42579
Toluene	ND	0.17		mg/Kg	5	5/5/2017 11:46:21 AM	B42579
Ethylbenzene	ND	0.17		mg/Kg	5	5/5/2017 11:46:21 AM	B42579
Xylenes, Total	0.49	0.35		mg/Kg	5	5/5/2017 11:46:21 AM	B42579
Surr: 4-Bromofluorobenzene	126	66.6-132		%Rec	5	5/5/2017 11:46:21 AM	B42579

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

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

## Analytical Report

Lab Order 1705311

Date Reported: 5/9/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-3

Project: Florance GC D 4A

Collection Date: 5/4/2017 11:46:00 AM

Lab ID: 1705311-008

Matrix: MEOH (SOIL)

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 12:59:35 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	110	10		mg/Kg	1	5/5/2017 2:35:53 PM	31585
Motor Oil Range Organics (MRO)	99	50		mg/Kg	1	5/5/2017 2:35:53 PM	31585
Surr: DNOP	88.5	70-130		%Rec	1	5/5/2017 2:35:53 PM	31585
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	21	19		mg/Kg	5	5/5/2017 12:10:19 PM	G42579
Surr: BFB	174	54-150	S	%Rec	5	5/5/2017 12:10:19 PM	G42579
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.096		mg/Kg	5	5/5/2017 12:10:19 PM	B42579
Toluene	ND	0.19		mg/Kg	5	5/5/2017 12:10:19 PM	B42579
Ethylbenzene	ND	0.19		mg/Kg	5	5/5/2017 12:10:19 PM	B42579
Xylenes, Total	ND	0.39		mg/Kg	5	5/5/2017 12:10:19 PM	B42579
Surr: 4-Bromofluorobenzene	118	66.6-132		%Rec	5	5/5/2017 12:10:19 PM	B42579

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1705311

Date Reported: 5/9/2017

CLIENT: Blagg Engineering

Client Sample ID: TSP-4

Project: Florance GC D 4A

Collection Date: 5/4/2017 11:48:00 AM

Lab ID: 1705311-009

Matrix: MEOH (SOIL)

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 1:12:00 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	190	9.9		mg/Kg	1	5/5/2017 2:08:08 PM	31585
Motor Oil Range Organics (MRO)	140	49		mg/Kg	1	5/5/2017 2:08:08 PM	31585
Surr: DNOP	87.4	70-130		%Rec	1	5/5/2017 2:08:08 PM	31585
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	27	18		mg/Kg	5	5/5/2017 12:34:14 PM	G42579
Surr: BFB	200	54-150	S	%Rec	5	5/5/2017 12:34:14 PM	G42579
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.089		mg/Kg	5	5/5/2017 12:34:14 PM	B42579
Toluene	ND	0.18		mg/Kg	5	5/5/2017 12:34:14 PM	B42579
Ethylbenzene	ND	0.18		mg/Kg	5	5/5/2017 12:34:14 PM	B42579
Xylenes, Total	ND	0.36		mg/Kg	5	5/5/2017 12:34:14 PM	B42579
Surr: 4-Bromofluorobenzene	119	66.6-132		%Rec	5	5/5/2017 12:34:14 PM	B42579

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

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

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: TSP-5  
 Project: Florance GC D 4A Collection Date: 5/4/2017 11:50:00 AM  
 Lab ID: 1705311-010 Matrix: MEOH (SOIL) Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 1:24:24 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	98	9.6		mg/Kg	1	5/5/2017 1:40:22 PM	31585
Motor Oil Range Organics (MRO)	79	48		mg/Kg	1	5/5/2017 1:40:22 PM	31585
Surr: DNOP	86.7	70-130		%Rec	1	5/5/2017 1:40:22 PM	31585
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	18	17		mg/Kg	5	5/5/2017 12:58:10 PM	G42579
Surr: BFB	178	54-150	S	%Rec	5	5/5/2017 12:58:10 PM	G42579
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.084		mg/Kg	5	5/5/2017 12:58:10 PM	B42579
Toluene	ND	0.17		mg/Kg	5	5/5/2017 12:58:10 PM	B42579
Ethylbenzene	ND	0.17		mg/Kg	5	5/5/2017 12:58:10 PM	B42579
Xylenes, Total	ND	0.33		mg/Kg	5	5/5/2017 12:58:10 PM	B42579
Surr: 4-Bromofluorobenzene	123	66.6-132		%Rec	5	5/5/2017 12:58:10 PM	B42579

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705311

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	MB-31588	SampType:	mbk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31588	RunNo:	42592					
Prep Date:	5/5/2017	Analysis Date:	5/5/2017	SeqNo:	1339643	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31588	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31588	RunNo:	42592					
Prep Date:	5/5/2017	Analysis Date:	5/5/2017	SeqNo:	1339644	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.5	90	110			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705311

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	LCS-31585		SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID: 31585			RunNo: 42570				
Prep Date:	5/5/2017		Analysis Date: 5/5/2017			SeqNo: 1339186		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.1	63.8	116			
Surr: DNOP	4.8		5.000		96.5	70	130			

Sample ID	MB-31585		SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID: 31585			RunNo: 42570				
Prep Date:	5/5/2017		Analysis Date: 5/5/2017			SeqNo: 1339187		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	70	130			

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1705311

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339451	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	980		1000		98.3	54	150			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339452	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	96.8	76.4	125			
Surr: BFB	1100		1000		114	54	150			

Sample ID	1705311-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	South South Base (	Batch ID:	G42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339453	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.6	18.10	0	101	61.3	150			
Surr: BFB	840		724.1		116	54	150			

Sample ID	1705311-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	South South Base (	Batch ID:	G42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339454	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.6	18.10	0	97.0	61.3	150	3.80	20	
Surr: BFB	800		724.1		111	54	150	0	0	

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1705311

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339464	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		117	66.6	132			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339465	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.1	80	120			
Toluene	0.95	0.050	1.000	0	95.4	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.1	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.4	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		121	66.6	132			

Sample ID	1705311-003AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	South Sidewall 7-pt	Batch ID:	B42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339466	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.76	0.020	0.8006	0	94.4	61.5	138			
Toluene	0.77	0.040	0.8006	0	96.2	71.4	127			
Ethylbenzene	0.79	0.040	0.8006	0	98.8	70.9	132			
Xylenes, Total	2.4	0.080	2.402	0	101	76.2	123			
Surr: 4-Bromofluorobenzene	0.96		0.8006		120	66.6	132			

Sample ID	1705311-003AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	South Sidewall 7-pt	Batch ID:	B42579	RunNo:	42579					
Prep Date:		Analysis Date:	5/5/2017	SeqNo:	1339467	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.020	0.8006	0	92.3	61.5	138	2.23	20	
Toluene	0.76	0.040	0.8006	0	94.7	71.4	127	1.56	20	
Ethylbenzene	0.78	0.040	0.8006	0	97.1	70.9	132	1.65	20	
Xylenes, Total	2.4	0.080	2.402	0	98.4	76.2	123	2.48	20	
Surr: 4-Bromofluorobenzene	0.94		0.8006		118	66.6	132	0	0	

### Qualifiers:

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



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

## Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1705311

RcptNo: .1

Received By: Ashley Gallegos 5/5/2017 6:45:00 AM

Completed By: Ashley Gallegos 5/5/2017 7:06:45 AM

Reviewed By: *SPC* *ARG* 05/05/17

*ARG*

*ARG*

### Chain of Custody

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

### Log In

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

### Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via:

eMail

Phone

Fax

In Person

Regarding:

Client Instructions:

17. Additional remarks:

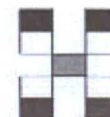
### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

# Chain-of-Custody Record

Client: **BP AMERICA**  
**BLAGG ENGINEERING INC.**  
Mailing Address:  
Phone #: **(505) 320-1183**  
email or Fax#:  
QA/QC Package:  
☒ Standard ☐ Level 4 (Full Validation)  
Accreditation  
☐ NELAP ☐ Other \_\_\_\_\_  
☐ EDD (Type) \_\_\_\_\_

Turn-Around Time: **SAME DAY**  
☐ Standard ☒ Rush  
Project Name:  
**FLORANCE GC D 4A**  
Project #:  
Project Manager:  
**J. Blagg**  
Sampler: **J. Blagg**  
On Ice: ☒ Yes ☐ No  
Sample Temperature: **1.3-0.1 = 1.2**



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MIBE + THPs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride	Air Bubbles (Y or N)
5/4/17	1225	Soil	South Base @ 25'	40241	COOL	-001	X	X										X	
	1228		South South Base (Tan) 25'			-002													
	1234		South Sidewall 7-pz			-003													
	1240		East Sidewall 5-pz			-004													
	1246		North Sidewall (East) 5-pz			-005													
	1140		TSP-1			-006													
	1143		TSP-2			-007													
	1146		TSP-3			-008													
	1148		TSP-4			-009													
	1150		TSP-5			-010													

Date: 5/4/17 Time: 1925 Relinquished by: Jeff Blagg Received by: [Signature] Date: 5/4/17 Time: 1925 Remarks: Bill BP  
VID: VHIXONEVRM  
WBS ELEMENT: L1-0018M-E: 22147  
Date: 5/4/17 Time: 2037 Relinquished by: [Signature] Received by: [Signature] Date: 05/05/17 Time: 0645  
TSP  
SAMPLES TREATED WITH H<sub>2</sub>O<sub>2</sub>

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



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

May 09, 2017

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 632-1199

FAX (505) 632-3903

RE: Florance GC D 4A

OrderNo.: 1705315

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 8 sample(s) on 5/5/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

## Analytical Report

Lab Order 1705315

Date Reported: 5/9/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-6

Project: Florance GC D 4A

Collection Date: 5/4/2017 11:53:00 AM

Lab ID: 1705315-001

Matrix: SOIL

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 3:16:05 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	440	9.5		mg/Kg	1	5/8/2017 3:07:17 PM	31596
Motor Oil Range Organics (MRO)	300	48		mg/Kg	1	5/8/2017 3:07:17 PM	31596
Surr: DNOP	108	70-130		%Rec	1	5/8/2017 3:07:17 PM	31596
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	21	4.6		mg/Kg	1	5/8/2017 9:38:21 AM	31589
Surr: BFB	435	54-150	S	%Rec	1	5/8/2017 9:38:21 AM	31589
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	5/8/2017 9:38:21 AM	31589
Toluene	ND	0.046		mg/Kg	1	5/8/2017 9:38:21 AM	31589
Ethylbenzene	ND	0.046		mg/Kg	1	5/8/2017 9:38:21 AM	31589
Xylenes, Total	ND	0.093		mg/Kg	1	5/8/2017 9:38:21 AM	31589
Surr: 4-Bromofluorobenzene	122	66.6-132		%Rec	1	5/8/2017 9:38:21 AM	31589

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

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

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering **Client Sample ID:** TSP-7  
**Project:** Florance GC D 4A **Collection Date:** 5/4/2017 11:55:00 AM  
**Lab ID:** 1705315-002 **Matrix:** SOIL **Received Date:** 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 3:28:30 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	640	19		mg/Kg	2	5/8/2017 3:52:18 PM	31596
Motor Oil Range Organics (MRO)	420	95		mg/Kg	2	5/8/2017 3:52:18 PM	31596
Surr: DNOP	111	70-130		%Rec	2	5/8/2017 3:52:18 PM	31596
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	33	4.9		mg/Kg	1	5/8/2017 10:02:22 AM	31589
Surr: BFB	484	54-150	S	%Rec	1	5/8/2017 10:02:22 AM	31589
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	5/8/2017 10:02:22 AM	31589
Toluene	ND	0.049		mg/Kg	1	5/8/2017 10:02:22 AM	31589
Ethylbenzene	ND	0.049		mg/Kg	1	5/8/2017 10:02:22 AM	31589
Xylenes, Total	ND	0.098		mg/Kg	1	5/8/2017 10:02:22 AM	31589
Surr: 4-Bromofluorobenzene	130	66.6-132		%Rec	1	5/8/2017 10:02:22 AM	31589

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

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

## Analytical Report

Lab Order 1705315

Date Reported: 5/9/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-8

Project: Florance GC D 4A

Collection Date: 5/4/2017 11:58:00 AM

Lab ID: 1705315-003

Matrix: SOIL

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 3:40:54 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	490	19		mg/Kg	2	5/8/2017 4:14:45 PM	31596
Motor Oil Range Organics (MRO)	340	94		mg/Kg	2	5/8/2017 4:14:45 PM	31596
Surr: DNOP	107	70-130		%Rec	2	5/8/2017 4:14:45 PM	31596
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	32	4.8		mg/Kg	1	5/8/2017 10:26:24 AM	31589
Surr: BFB	487	54-150	S	%Rec	1	5/8/2017 10:26:24 AM	31589
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/8/2017 10:26:24 AM	31589
Toluene	ND	0.048		mg/Kg	1	5/8/2017 10:26:24 AM	31589
Ethylbenzene	ND	0.048		mg/Kg	1	5/8/2017 10:26:24 AM	31589
Xylenes, Total	ND	0.095		mg/Kg	1	5/8/2017 10:26:24 AM	31589
Surr: 4-Bromofluorobenzene	124	66.6-132		%Rec	1	5/8/2017 10:26:24 AM	31589

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

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

## Analytical Report

Lab Order 1705315

Date Reported: 5/9/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-9

Project: Florance GC D 4A

Collection Date: 5/4/2017 12:02:00 PM

Lab ID: 1705315-004

Matrix: SOIL

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 3:53:19 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	470	20		mg/Kg	2	5/8/2017 4:37:15 PM	31596
Motor Oil Range Organics (MRO)	330	99		mg/Kg	2	5/8/2017 4:37:15 PM	31596
Surr: DNOP	108	70-130		%Rec	2	5/8/2017 4:37:15 PM	31596
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	38	23		mg/Kg	5	5/8/2017 10:50:38 AM	31589
Surr: BFB	198	54-150	S	%Rec	5	5/8/2017 10:50:38 AM	31589
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.12		mg/Kg	5	5/8/2017 10:50:38 AM	31589
Toluene	ND	0.23		mg/Kg	5	5/8/2017 10:50:38 AM	31589
Ethylbenzene	ND	0.23		mg/Kg	5	5/8/2017 10:50:38 AM	31589
Xylenes, Total	ND	0.46		mg/Kg	5	5/8/2017 10:50:38 AM	31589
Surr: 4-Bromofluorobenzene	117	66.6-132		%Rec	5	5/8/2017 10:50:38 AM	31589

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1705315

Date Reported: 5/9/2017

CLIENT: Blagg Engineering

Client Sample ID: TSP-10

Project: Florance GC D 4A

Collection Date: 5/4/2017 12:05:00 PM

Lab ID: 1705315-005

Matrix: SOIL

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 4:05:44 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	380	19		mg/Kg	2	5/8/2017 5:00:03 PM	31596
Motor Oil Range Organics (MRO)	290	96		mg/Kg	2	5/8/2017 5:00:03 PM	31596
Surr: DNOP	106	70-130		%Rec	2	5/8/2017 5:00:03 PM	31596
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	22	4.8		mg/Kg	1	5/8/2017 11:14:50 AM	31589
Surr: BFB	391	54-150	S	%Rec	1	5/8/2017 11:14:50 AM	31589
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/8/2017 11:14:50 AM	31589
Toluene	ND	0.048		mg/Kg	1	5/8/2017 11:14:50 AM	31589
Ethylbenzene	ND	0.048		mg/Kg	1	5/8/2017 11:14:50 AM	31589
Xylenes, Total	ND	0.096		mg/Kg	1	5/8/2017 11:14:50 AM	31589
Surr: 4-Bromofluorobenzene	126	66.6-132		%Rec	1	5/8/2017 11:14:50 AM	31589

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

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

## Analytical Report

Lab Order 1705315

Date Reported: 5/9/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-11

Project: Florance GC D 4A

Collection Date: 5/4/2017 12:08:00 PM

Lab ID: 1705315-006

Matrix: SOIL

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 4:18:08 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	620	19		mg/Kg	2	5/8/2017 4:57:23 PM	31596
Motor Oil Range Organics (MRO)	480	94		mg/Kg	2	5/8/2017 4:57:23 PM	31596
Surr: DNOP	101	70-130		%Rec	2	5/8/2017 4:57:23 PM	31596
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	44	4.7		mg/Kg	1	5/8/2017 11:38:56 AM	31589
Surr: BFB	597	54-150	S	%Rec	1	5/8/2017 11:38:56 AM	31589
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/8/2017 11:38:56 AM	31589
Toluene	ND	0.047		mg/Kg	1	5/8/2017 11:38:56 AM	31589
Ethylbenzene	ND	0.047		mg/Kg	1	5/8/2017 11:38:56 AM	31589
Xylenes, Total	ND	0.095		mg/Kg	1	5/8/2017 11:38:56 AM	31589
Surr: 4-Bromofluorobenzene	130	66.6-132		%Rec	1	5/8/2017 11:38:56 AM	31589

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1705315

Date Reported: 5/9/2017

CLIENT: Blagg Engineering

Client Sample ID: TSP-12

Project: Florance GC D 4A

Collection Date: 5/4/2017 1:13:00 PM

Lab ID: 1705315-007

Matrix: SOIL

Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 4:30:32 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	370	19		mg/Kg	2	5/8/2017 4:29:06 PM	31596
Motor Oil Range Organics (MRO)	280	93		mg/Kg	2	5/8/2017 4:29:06 PM	31596
Surr: DNOP	104	70-130		%Rec	2	5/8/2017 4:29:06 PM	31596
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	28	4.7		mg/Kg	1	5/8/2017 12:02:50 PM	31589
Surr: BFB	450	54-150	S	%Rec	1	5/8/2017 12:02:50 PM	31589
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	5/8/2017 12:02:50 PM	31589
Toluene	ND	0.047		mg/Kg	1	5/8/2017 12:02:50 PM	31589
Ethylbenzene	ND	0.047		mg/Kg	1	5/8/2017 12:02:50 PM	31589
Xylenes, Total	ND	0.094		mg/Kg	1	5/8/2017 12:02:50 PM	31589
Surr: 4-Bromofluorobenzene	129	66.6-132		%Rec	1	5/8/2017 12:02:50 PM	31589

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

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

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering **Client Sample ID:** TSP-13  
**Project:** Florance GC D 4A **Collection Date:** 5/4/2017 1:18:00 PM  
**Lab ID:** 1705315-008 **Matrix:** SOIL **Received Date:** 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/5/2017 4:42:57 PM	31588
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	570	19		mg/Kg	2	5/8/2017 4:00:46 PM	31596
Motor Oil Range Organics (MRO)	430	95		mg/Kg	2	5/8/2017 4:00:46 PM	31596
Surr: DNOP	104	70-130		%Rec	2	5/8/2017 4:00:46 PM	31596
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	28	4.8		mg/Kg	1	5/8/2017 12:26:43 PM	31589
Surr: BFB	419	54-150	S	%Rec	1	5/8/2017 12:26:43 PM	31589
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/8/2017 12:26:43 PM	31589
Toluene	ND	0.048		mg/Kg	1	5/8/2017 12:26:43 PM	31589
Ethylbenzene	ND	0.048		mg/Kg	1	5/8/2017 12:26:43 PM	31589
Xylenes, Total	ND	0.096		mg/Kg	1	5/8/2017 12:26:43 PM	31589
Surr: 4-Bromofluorobenzene	125	66.6-132		%Rec	1	5/8/2017 12:26:43 PM	31589

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705315

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	MB-31588	SampType:	mbk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31588	RunNo:	42592					
Prep Date:	5/5/2017	Analysis Date:	5/5/2017	SeqNo:	1339643	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31588	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31588	RunNo:	42592					
Prep Date:	5/5/2017	Analysis Date:	5/5/2017	SeqNo:	1339644	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.5	90	110			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705315

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	MB-31596		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	31596		RunNo:	42598				
Prep Date:	5/5/2017		Analysis Date:	5/8/2017		SeqNo:	1340115		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10		10.00		103	70	130				

Sample ID	LCS-31596		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 31596		RunNo: 42598					
Prep Date:	5/5/2017		Analysis Date: 5/8/2017		SeqNo: 1340286		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.0	63.8	116			
Surr: DNOP	4.9		5.000		97.2	70	130			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705315

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	MB-31589		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	31589		RunNo:	42608				
Prep Date:	5/5/2017		Analysis Date:	5/8/2017		SeqNo:	1340668		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	960		1000		96.1	54	150				

Sample ID	LCS-31589		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 31589		RunNo: 42608					
Prep Date:	5/5/2017		Analysis Date: 5/8/2017		SeqNo: 1340669		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.0	76.4	125			
Surr: BFB	1100		1000		111	54	150			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705315

09-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	MB-31589	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	31589	RunNo:	42608					
Prep Date:	5/5/2017	Analysis Date:	5/8/2017	SeqNo:	1340679	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		114	66.6	132			

Sample ID	LCS-31589	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	31589	RunNo:	42608					
Prep Date:	5/5/2017	Analysis Date:	5/8/2017	SeqNo:	1340680	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	66.6	132			

## Qualifiers:

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



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

## Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1705315

RcptNo: 1

Received By: Ashley Gallegos

5/5/2017 6:45:00 AM

*AG*

Completed By: Ashley Gallegos

5/5/2017 7:29:15 AM

*AG*

Reviewed By:

*ENM/AG*

*05/05/17*

### Chain of Custody

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

### Log In

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

### Special Handling (If applicable)

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

Person Notified:

Date

By Whom:

Via:

eMail

Phone

Fax

In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: <u>BP America</u>	<input type="checkbox"/> Standard	<u>By Monday 5/8/17</u> <input checked="" type="checkbox"/> Rush
<u>Burke Engineering Inc.</u>	Project Name:	
Mailing Address:	<u>FLORANCE GC D 4A</u>	
	Project #:	
Phone #: <u>(505) 320-1103</u>		
email or Fax#:	Project Manager:	
QA/QC Package:	<u>J. Burke</u>	
<input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)	Sampler: <u>J. Burke</u>	
Accreditation	On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____	Sample Temperature: <u>1.3-0.1 (REF) = 1.2</u>	
<input type="checkbox"/> EDD (Type) _____		

Turn-Around Time: *By Monday*  
*5/8/17*

Project Name: FLORANCE GC D 4A

Project #:	

Project Manager:  
J. Burble

Sampler: J. Beale  
 On Ice: ☒ Yes ☐ No

Sample Temperature: <i>13.0 (CP) - 1.2</i>		
Container	Preservative	HEAL No.

Type and #	Type	1705315
403 x 1	comp	-001

1	1	-002
		-003

				-604
				-005

				-0010
				-007
				-0

		-008


Received by:	Date	Time
Christine Walsh	5/4/17	1925

Received by: Asheley M. Guegas Date 05/08/17 Time 0645  
Contracted to other accredited laboratories. This serves as notice of the



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

	X	BTEX + <del>MIBE</del> + TMB's (8021)
		BTEX + MTBE + TPH (Gas only)
	X	TPH 8015B (GRO / DRO / MIRO)
		TPH (Method 418.1)
		EDB (Method 504.1)
		PAH's (8310 or 8270 SIMS)
		RCRA 8 Metals
		Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )
		8081 Pesticides / 8082 PCB's
		8260B (VOA)
		8270 (Semi-VOA)
	X	<i>CHLORINE</i>
		Air Bubbles (Y or N)

Date: 5/4/17	Time: 1925	Relinquished by: J.H. Blegg	Received by: Arthur Walth	Date 5/4/17	Time 1925
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Date:	Time:	Relinquished by:	Received by:	Date:	Time:
5/4/17	2037	Christa Walter	Debbie M. Jorgensen	05/05/17	0645

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of the

Remarks: Bill BP Contact: Steve Mustel  
VID: VHIXONEVRM  
WBS: 11-0318M-F:22147

<p>Samples treated with <math>H_2O_2</math></p>
---

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



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

May 12, 2017

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

RE: FLORANCE GC D 4A

OrderNo.: 1705513

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 3 sample(s) on 5/10/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1705513

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-14

Project: FLORANCE GC D 4A

Collection Date: 5/9/2017 11:48:00 AM

Lab ID: 1705513-001

Matrix: SOIL

Received Date: 5/10/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/10/2017 10:11:29 AM	31661
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	120	9.6		mg/Kg	1	5/10/2017 9:27:18 AM	31659
Motor Oil Range Organics (MRO)	110	48		mg/Kg	1	5/10/2017 9:27:18 AM	31659
Surr: DNOP	111	70-130		%Rec	1	5/10/2017 9:27:18 AM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	21		mg/Kg	5	5/10/2017 10:11:59 AM	31645
Surr: BFB	136	54-150		%Rec	5	5/10/2017 10:11:59 AM	31645
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.10		mg/Kg	5	5/10/2017 10:11:59 AM	31645
Toluene	ND	0.21		mg/Kg	5	5/10/2017 10:11:59 AM	31645
Ethylbenzene	ND	0.21		mg/Kg	5	5/10/2017 10:11:59 AM	31645
Xylenes, Total	ND	0.42		mg/Kg	5	5/10/2017 10:11:59 AM	31645
Surr: 4-Bromofluorobenzene	121	66.6-132		%Rec	5	5/10/2017 10:11:59 AM	31645

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

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

# Analytical Report

Lab Order 1705513

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-15

Project: FLORANCE GC D 4A

Collection Date: 5/9/2017 11:54:00 AM

Lab ID: 1705513-002

Matrix: SOIL

Received Date: 5/10/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/10/2017 10:23:53 AM	31661
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	120	10		mg/Kg	1	5/10/2017 9:56:16 AM	31659
Motor Oil Range Organics (MRO)	100	50		mg/Kg	1	5/10/2017 9:56:16 AM	31659
Surr: DNOP	112	70-130		%Rec	1	5/10/2017 9:56:16 AM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	22		mg/Kg	5	5/10/2017 10:36:10 AM	31645
Surr: BFB	150	54-150	S	%Rec	5	5/10/2017 10:36:10 AM	31645
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.11		mg/Kg	5	5/10/2017 10:36:10 AM	31645
Toluene	ND	0.22		mg/Kg	5	5/10/2017 10:36:10 AM	31645
Ethylbenzene	ND	0.22		mg/Kg	5	5/10/2017 10:36:10 AM	31645
Xylenes, Total	ND	0.44		mg/Kg	5	5/10/2017 10:36:10 AM	31645
Surr: 4-Bromofluorobenzene	118	66.6-132		%Rec	5	5/10/2017 10:36:10 AM	31645

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

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

## Analytical Report

Lab Order 1705513

Date Reported: 5/12/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering  
 Project: FLORANCE GC D 4A  
 Lab ID: 1705513-003

Matrix: SOIL

Client Sample ID: TSP-16  
 Collection Date: 5/9/2017 11:59:00 AM  
 Received Date: 5/10/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/10/2017 10:36:18 AM	31661
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	81	10		mg/Kg	1	5/10/2017 10:18:17 AM	31659
Motor Oil Range Organics (MRO)	65	50		mg/Kg	1	5/10/2017 10:18:17 AM	31659
Surr: DNOP	111	70-130		%Rec	1	5/10/2017 10:18:17 AM	31659
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	17		mg/Kg	5	5/10/2017 11:00:30 AM	31645
Surr: BFB	147	54-150		%Rec	5	5/10/2017 11:00:30 AM	31645
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.086		mg/Kg	5	5/10/2017 11:00:30 AM	31645
Toluene	ND	0.17		mg/Kg	5	5/10/2017 11:00:30 AM	31645
Ethylbenzene	ND	0.17		mg/Kg	5	5/10/2017 11:00:30 AM	31645
Xylenes, Total	ND	0.34		mg/Kg	5	5/10/2017 11:00:30 AM	31645
Surr: 4-Bromofluorobenzene	116	66.6-132		%Rec	5	5/10/2017 11:00:30 AM	31645

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705513

12-May-17

Client: Blagg Engineering  
Project: FLORANCE GC D 4A

Sample ID	MB-31661	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31661	RunNo:	42677					
Prep Date:	5/10/2017	Analysis Date:	5/10/2017	SeqNo:	1342916	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31661	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31661	RunNo:	42677					
Prep Date:	5/10/2017	Analysis Date:	5/10/2017	SeqNo:	1342917	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.2	90	110			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705513

12-May-17

Client: Blagg Engineering  
Project: FLORANCE GC D 4A

Sample ID	LCS-31659		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	31659		RunNo:	42671				
Prep Date:	5/10/2017		Analysis Date:	5/10/2017		SeqNo:	1342637		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	48	10	50.00	0	95.4	63.8	116				
Surr: DNOP	4.8		5.000		95.3	70	130				

Sample ID	MB-31659	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	31659		RunNo:	42671				
Prep Date:	5/10/2017	Analysis Date:	5/10/2017		SeqNo:	1342638	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	70	130			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705513

12-May-17

Client: Blagg Engineering  
Project: FLORANCE GC D 4A

Sample ID	MB-31645	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31645	RunNo:	42687					
Prep Date:	5/9/2017	Analysis Date:	5/10/2017	SeqNo:	1343155	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	1100		1000		106	54	150			

Sample ID	LCS-31645	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31645	RunNo:	42687					
Prep Date:	5/9/2017	Analysis Date:	5/10/2017	SeqNo:	1343156	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	76.4	125			
Surr: BFB	1300		1000		126	54	150			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705513

12-May-17

Client: Blagg Engineering  
Project: FLORANCE GC D 4A

Sample ID	<b>MB-31645</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>31645</b>		RunNo:	<b>42687</b>			
Prep Date:	<b>5/9/2017</b>		Analysis Date:	<b>5/10/2017</b>		SeqNo:	<b>1343246</b>	Units:	<b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		122	66.6	132			

Sample ID	<b>LCS-31645</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>31645</b>		RunNo:	<b>42687</b>			
Prep Date:	<b>5/9/2017</b>		Analysis Date:	<b>5/10/2017</b>		SeqNo:	<b>1343247</b>	Units:	<b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.7	80	120			
Toluene	0.97	0.050	1.000	0	96.9	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.4	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.4	80	120			
Surr: 4-Bromofluorobenzene	1.3		1.000		134	66.6	132			S

## Qualifiers:

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



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

## Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1705513

RcptNo: 1

Received By: Anne Thorne 5/10/2017 7:30:00 AM

Completed By: Anne Thorne 5/10/2017 7:42:48 AM

Reviewed By: *at*

5/10/17

*Anne Thorne*

*Anne Thorne*

### Chain of Custody

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

### Log In

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

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: <u>BP America</u>	<input type="checkbox"/> Standard	<input checked="" type="checkbox"/> Rush <u>SAME DAY</u>
<u>BLAB Engineering Inc.</u>	Project Name:	
Mailing Address:	<u>FLORANCE GC D 4A</u>	
	Project #:	
Phone #: <u>505-320-1103</u>		
email or Fax#:	Project Manager:	
	<u>J. BLAB</u>	
QA/QC Package:		
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		
Accreditation	Sampler: <u>J. BLAB</u>	
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____	On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> EDD (Type)	Sample Temperature: <u>2.1 - CFID - 1.6</u>	

SAME  
DAY

☐ Standard ☒ Rush

Project Name:

FLORANCE GC D 4A

Project #:

Project Manager:

J. BLAU

Sampler: J. Beale

On Ice: ☒ Yes ☐ No

Sample Temperature:  $2.1 - CFH.0 = 1.6$

Date	Time	Matrix	Sample Request ID
------	------	--------	-------------------

Articulation Container Type and #	Preservative Type
---	----------------------

HEAL No.

9/20/17	1148	soil	TSP-14
1	1154	1	TSP-15
	1159	1	TSP-16

402-1	conc
-------	------

7655/3

74

742

703

BBTEX + <del>MTBE</del> + <del>THM's</del> (8021)
BBTEX + MTBE + TPH (Gas only)
TPH 8015B (GRO / DRO / MRO)
TPH (Method 418.1)
EDB (Method 504.1)
PAH's (8310 or 8270 SIMS)
RCRA 8 Metals
Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )
6081 Pesticides / 8082 PCB's
8260B (VOA)
8270 (Semi-VOA)
Chloride
Air Bubbles (Y or N)

Date:	Time:	Relinquished by:
6/9/2017	1411	Jeff Blegg

Received by:	Date	Time
Christine Laet	5/9/2017	1411

Date:	Time:	Relinquished by:
7/9/7	1940	Master Wallace

Received by: *Chris* Date *05/16/17* Time *0730*

Remarks: Bill BP contact: Steve Maska  
VID: VHIXONEVRM  
WBS ELEMENT: L1-0018M-E:22147

WBS ELEMENT: L1-0018M-E:22147

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



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

May 15, 2017

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

RE: Florance GC D 4A

OrderNo.: 1705653

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/12/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1705653

Date Reported: 5/15/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-17

Project: Florance GC D 4A

Collection Date: 5/11/2017 11:53:00 AM

Lab ID: 1705653-001

Matrix: MEOH (SOIL)

Received Date: 5/12/2017 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/12/2017 10:14:28 AM	31710
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	43	10		mg/Kg	1	5/12/2017 10:02:47 AM	31701
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	5/12/2017 10:02:47 AM	31701
Surr: DNOP	103	70-130		%Rec	1	5/12/2017 10:02:47 AM	31701
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	9.3	3.7		mg/Kg	1	5/12/2017 10:14:15 AM	31697
Surr: BFB	286	54-150	S	%Rec	1	5/12/2017 10:14:15 AM	31697
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	5/12/2017 10:14:15 AM	31697
Toluene	ND	0.037		mg/Kg	1	5/12/2017 10:14:15 AM	31697
Ethylbenzene	ND	0.037		mg/Kg	1	5/12/2017 10:14:15 AM	31697
Xylenes, Total	ND	0.073		mg/Kg	1	5/12/2017 10:14:15 AM	31697
Surr: 4-Bromofluorobenzene	114	66.6-132		%Rec	1	5/12/2017 10:14:15 AM	31697

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

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

## Analytical Report

Lab Order 1705653

Date Reported: 5/15/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-18

Project: Florance GC D 4A

Collection Date: 5/11/2017 11:59:00 AM

Lab ID: 1705653-002

Matrix: MEOH (SOIL)

Received Date: 5/12/2017 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/12/2017 10:26:53 AM	31710
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	85	9.5		mg/Kg	1	5/12/2017 10:24:55 AM	31701
Motor Oil Range Organics (MRO)	61	48		mg/Kg	1	5/12/2017 10:24:55 AM	31701
Surr: DNOP	105	70-130		%Rec	1	5/12/2017 10:24:55 AM	31701
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	11	3.4		mg/Kg	1	5/12/2017 10:38:14 AM	31697
Surr: BFB	329	54-150	S	%Rec	1	5/12/2017 10:38:14 AM	31697
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	5/12/2017 10:38:14 AM	31697
Toluene	ND	0.034		mg/Kg	1	5/12/2017 10:38:14 AM	31697
Ethylbenzene	ND	0.034		mg/Kg	1	5/12/2017 10:38:14 AM	31697
Xylenes, Total	ND	0.068		mg/Kg	1	5/12/2017 10:38:14 AM	31697
Surr: 4-Bromofluorobenzene	112	66.6-132		%Rec	1	5/12/2017 10:38:14 AM	31697

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1705653

15-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	MB-31710	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31710	RunNo:	42747					
Prep Date:	5/12/2017	Analysis Date:	5/12/2017	SeqNo:	1345405	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31710	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31710	RunNo:	42747					
Prep Date:	5/12/2017	Analysis Date:	5/12/2017	SeqNo:	1345406	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1705653

15-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	LCS-31701		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 31701		RunNo: 42745					
Prep Date:	5/12/2017		Analysis Date: 5/12/2017		SeqNo: 1344751		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.6	63.8	116			
Surr: DNOP	4.5		5.000		91.0	70	130			

Sample ID	MB-31701	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 31701			RunNo: 42745					
Prep Date:	5/12/2017	Analysis Date: 5/12/2017			SeqNo: 1344752		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.5	70	130			

Sample ID	1705653-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-17		Batch ID: 31701		RunNo: 42745					
Prep Date:	5/12/2017		Analysis Date: 5/12/2017		SeqNo: 1345191		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	9.8	49.16	42.72	134	51.6	130			S
Surr: DNOP	5.1		4.916		103	70	130			

Sample ID	1705653-001AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-17		Batch ID: 31701		RunNo: 42745					
Prep Date:	5/12/2017		Analysis Date: 5/12/2017		SeqNo: 1345192		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	100	9.5	47.57	42.72	130	51.6	130	3.77	20	
Surr: DNOP	4.9		4.757		102	70	130	0	0	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705653

15-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	MB-31697	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31697	RunNo:	42754					
Prep Date:	5/11/2017	Analysis Date:	5/12/2017	SeqNo:	1345149	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		90.5	54	150			

Sample ID	LCS-31697	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31697	RunNo:	42754					
Prep Date:	5/11/2017	Analysis Date:	5/12/2017	SeqNo:	1345150	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	96.2	76.4	125			
Surr: BFB	1000		1000		102	54	150			

Sample ID	1705653-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-17	Batch ID:	31697	RunNo:	42754					
Prep Date:		Analysis Date:	5/12/2017	SeqNo:	1345151	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	3.7	18.36	9.346	110	61.3	150			
Surr: BFB	2000		734.2		271	54	150			S

Sample ID	1705653-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-17	Batch ID:	31697	RunNo:	42754					
Prep Date:		Analysis Date:	5/12/2017	SeqNo:	1345152	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	3.7	18.36	9.346	113	61.3	150	1.80	20	
Surr: BFB	2200		734.2		301	54	150	0	0	S

## Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1705653

15-May-17

Client: Blagg Engineering

Project: Florance GC D 4A

Sample ID	<b>MB-31697</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>31697</b>		RunNo:	<b>42754</b>			
Prep Date:	<b>5/11/2017</b>		Analysis Date:	<b>5/12/2017</b>		SeqNo:	<b>1345155</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	66.6	132			

Sample ID	<b>LCS-31697</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>31697</b>		RunNo:	<b>42754</b>			
Prep Date:	<b>5/11/2017</b>		Analysis Date:	<b>5/12/2017</b>		SeqNo:	<b>1345156</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.5	80	120			
Toluene	0.94	0.050	1.000	0	93.6	80	120			
Ethylbenzene	0.95	0.050	1.000	0	94.5	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.4	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	66.6	132			

### Qualifiers:

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



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

## Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1705653

RcptNo: 1

Received By: John Caldwell

5/12/2017 7:45:00 AM

*John Caldwell*

Completed By: Andy Jansson

5/12/2017 8:05:00 AM

*Andy Jansson*

Reviewed By: ENM

05/12/17

### Chain of Custody

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

### Log In

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

### Special Handling (if applicable)

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

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

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.8	Good	Yes			

Chain-of-Custody Record		Turn-Around Time: <u>SAME DAY</u>
Client: <u>BP America</u>	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	
<u>Blagg Engineering</u>	Project Name:	<u>FLORANCE GC D 4A</u>
Mailing Address:	Project #:	
	Project Manager:	<u>J. Blagg</u>
Phone #: <u>(505) 320-1183</u>	QA/QC Package:	Sampler: <u>J. Blagg</u>
email or Fax#:	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)	On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Accreditation	<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____	Sample Temperature: <u>5.8</u>
<input type="checkbox"/> EDD (Type) _____		

☐ Standard ☒ Rush *DR*

Project Name: *FLORANCE GC D 4A*

Project #:

Project Manager:

Sampler: J. Blagg

On Ice: ☒ Yes ☐ No

Sample Temperature: 5.8

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

[illegible]

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