

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

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

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: Barnes B 003A	Facility Type: Natural gas well
Surface Owner: Federal	Mineral Owner: Federal
API No. 3004522515	

LOCATION OF RELEASE

Unit Letter D	Section 27	Township 32N	Range 11W	Feet from the 860	North/South Line North	Feet from the 1100	East/West Line West	County: San Juan
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Latitude 36.960642° Longitude -107.981739°

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: April 6, 2017
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. OIL CONS. DIV DIST. 3	

If a Watercourse was Impacted, Describe Fully.* **AUG 09 2017**

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 remediated via excavation and treated on site via soil shredding. The extents were completely delineated.

Describe Area Affected and Cleanup Action Taken.* The total area excavated measured 53'x30'x18' deep with a total of 1,700 cubic yards of soil successfully treated and used for backfill. Closure sampling indicates no further action required. Attached is a field report and laboratory results.

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:	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Steve Moskal	Approved by Environmental Specialist:	
Title: Field Environmental Coordinator	Approval Date: <u>9/13/17</u>	Expiration Date:
E-mail Address: steven.moskal@bp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: August 8, 2017	Phone: 505-326-9497	

* Attach Additional Sheets If Necessary

#NMF 17118 49918

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BP America
Barnes B 3A
(D) Sec 27 – T32N – R11W
San Juan County, New Mexico
API: 30-045-22515

Summary Record of Impact Remediation

April 6, 2017 Soils impacted with hydrocarbons encountered during closure sampling at a 95 barrel below grade tank. The original source appeared to be an integrity issue with the tank piping and connections. A preliminary investigation using a backhoe determined the impact footprint to be approximately 30' x 30' x 11' deep.

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

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

Total Site Ranking: 10

May 1, 2017 Begin site remediation via excavation at the initial impact discovery center. Prepare to treat impacted material on-site via soil shredding and chemical treatment.

May 3, 2017 Conduct witnessed sampling of remedial excavation. Final perimeter of excavation approximately 53' x 30' x 18' deep. Begin treating impacted soils via soil shredding.

May 4, 2017 Conduct witnessed sampling of 10 x 100 CY piles of treated soils.

May 5, 2017 Conduct witnessed sampling of 1 x 300 CY and 1 x 400 piles of treated soils.

May 8, 2017 Final review of laboratory analytical reports on excavation and treated soils indicates that remedial excavation and treated soils meet NMOCD/BLM standards for closure.

May 12, 2017 Complete backfilling of excavation using treated soils.

Summary laboratory data documenting remedial excavation closure:

Sample ID	Date	TPH Total (mg/Kg)	BTEX Total (mg/Kg)	Benzene (mg/Kg)	Comments
1: East Wall, North (8'-14')	5/3/2017	ND	ND	ND	
2: North Wall & NW (10'-15')	5/3/2017	617	20.3	ND	
3: West Wall, South (10'-14')	5/3/2017	ND	ND	ND	
4: South Wall & East (8'-14')	5/3/2017	ND	ND	ND	
5: South Base @ 18'	5/3/2017	ND	ND	ND	
6: North Base @ 17'	5/3/2017	ND	ND	ND	
NMOCD Closure Standard		1,000	50	10	

Summary laboratory data documenting treated soil closure:

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	5/3/2017	5/4/2017	67.7	0.78	29	ND	ND	29	ND
TSP-2	100	5/3/2017	5/4/2017	114	0.62	46	ND	ND	46	ND
TSP-3	100	5/3/2017	5/4/2017	112	0.72	73	16	ND	89	ND
TSP-4	100	5/3/2017	5/4/2017	155	2.67	110	17	ND	127	ND
TSP-5	100	5/3/2017	5/4/2017	99.2	0.71	59	9.7	ND	68.7	ND
TSP-6	100	5/4/2017	5/4/2017	51.5	ND	36	18	ND	54	ND
TSP-7	100	5/4/2017	5/4/2017	52.0	0.35	27	13	ND	40	ND
TSP-8	100	5/4/2017	5/4/2017	56.2	1.7	69	16	ND	85	ND
TSP-9	100	5/4/2017	5/4/2017	51.2	0.41	50	16	ND	66	ND
TSP-10	100	5/4/2017	5/4/2017	20.9	ND	ND	ND	ND	ND	ND
TSP-11	100	5/4/2017	5/5/2017	106						
TSP-12	100	5/4/2017	5/5/2017	77.0						
TSP-13	100	5/4/2017	5/5/2017	59.9						
Submit	3-point	of piles	11-12-13:		0.45	58	12	ND	70	ND
TSP-14	100	5/4/2017	5/5/2017	83.6						
TSP-15	100	5/4/2017	5/5/2017	84.5						
TSP-16	100	5/4/2017	5/5/2017	59.2						
TSP-17	100	5/4/2017	5/5/2017	22.6						
Submit	4-point	of piles	14-15-16-17:		.38	47	ND	ND	47	ND

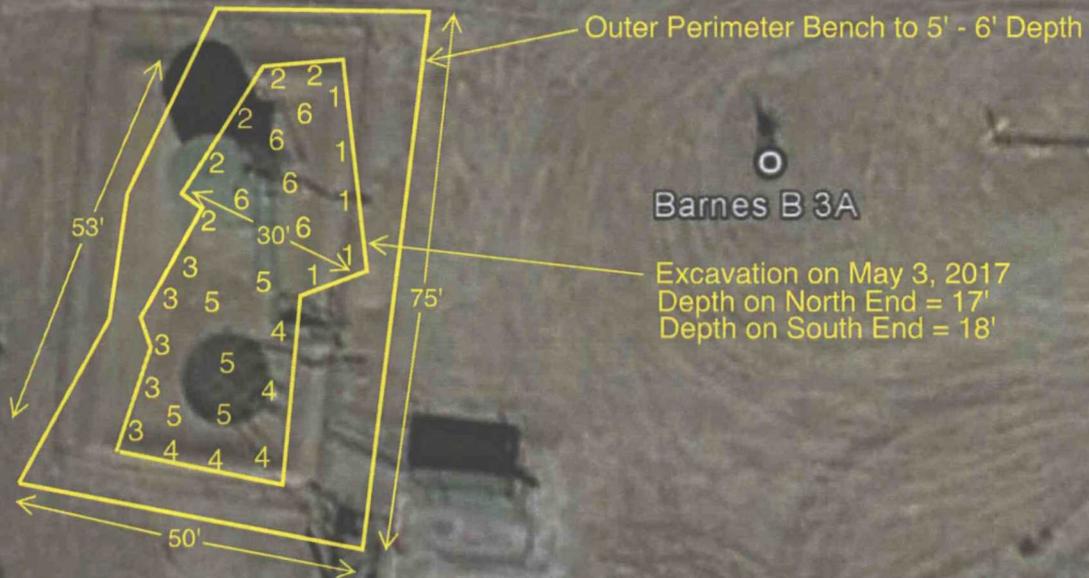
Site Closure Standard: 1,000 ppm total TPH

Barnes B 3A

(D) Sec 27 - R32N - R11W

API: 30-045-22515

- Closure Sampling, May 3, 2017
- 1 - East Wall (north) 5-pt TPH = ND
 - 2 - North Wall & NW 5-pt TPH = 617 ppm
 - 3 - West Wall (south) 5-pt TPH = ND
 - 4 - South Wall & East (south) 5-pt TPH = ND
 - 5 - South Base 5-pt TPH = ND
 - 6 - North Base 5-pt TPH = ND



Outer Perimeter Bench to 5' - 6' Depth

Barnes B 3A

Excavation on May 3, 2017
Depth on North End = 17'
Depth on South End = 18'

Laboratory Analytical Reports



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

May 05, 2017

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

RE: Barnes B 3A

OrderNo.: 1705215

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 6 sample(s) on 5/4/2017 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 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705215

Date Reported: 5/5/2017

CLIENT: Blagg Engineering

Client Sample ID: East Wall (North) 8'-14'

Project: Barnes B 3A

Collection Date: 5/3/2017 1:15:00 PM

Lab ID: 1705215-001

Matrix: MEOH (SOIL)

Received Date: 5/4/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	5/4/2017 11:02:42 AM	31565
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	5/4/2017 11:02:31 AM	G42546
Surr: BFB	99.3	70-130		%Rec	5	5/4/2017 11:02:31 AM	G42546
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/4/2017 9:47:08 AM	31563
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/4/2017 9:47:08 AM	31563
Surr: DNOP	101	70-130		%Rec	1	5/4/2017 9:47:08 AM	31563
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.093		mg/Kg	5	5/4/2017 11:02:31 AM	S42546
Toluene	ND	0.19		mg/Kg	5	5/4/2017 11:02:31 AM	S42546
Ethylbenzene	ND	0.19		mg/Kg	5	5/4/2017 11:02:31 AM	S42546
Xylenes, Total	ND	0.37		mg/Kg	5	5/4/2017 11:02:31 AM	S42546
Surr: 1,2-Dichloroethane-d4	98.3	70-130		%Rec	5	5/4/2017 11:02:31 AM	S42546
Surr: 4-Bromofluorobenzene	94.5	70-130		%Rec	5	5/4/2017 11:02:31 AM	S42546
Surr: Dibromofluoromethane	96.7	70-130		%Rec	5	5/4/2017 11:02:31 AM	S42546
Surr: Toluene-d8	97.4	70-130		%Rec	5	5/4/2017 11:02:31 AM	S42546

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:** North Wall & NW 10'-15'
Project: Barnes B 3A **Collection Date:** 5/3/2017 1:25:00 PM
Lab ID: 1705215-002 **Matrix:** MEOH (SOIL) **Received Date:** 5/4/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	5/4/2017 11:15:06 AM	31565
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	580	39		mg/Kg	10	5/4/2017 11:31:09 AM	G42546
Surr: BFB	101	70-130		%Rec	10	5/4/2017 11:31:09 AM	G42546
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	37	9.3		mg/Kg	1	5/4/2017 10:09:07 AM	31563
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/4/2017 10:09:07 AM	31563
Surr: DNOP	104	70-130		%Rec	1	5/4/2017 10:09:07 AM	31563
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.20		mg/Kg	10	5/4/2017 11:31:09 AM	S42546
Toluene	ND	0.39		mg/Kg	10	5/4/2017 11:31:09 AM	S42546
Ethylbenzene	1.3	0.39		mg/Kg	10	5/4/2017 11:31:09 AM	S42546
Xylenes, Total	19	0.79		mg/Kg	10	5/4/2017 11:31:09 AM	S42546
Surr: 1,2-Dichloroethane-d4	93.8	70-130		%Rec	10	5/4/2017 11:31:09 AM	S42546
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	10	5/4/2017 11:31:09 AM	S42546
Surr: Dibromofluoromethane	95.2	70-130		%Rec	10	5/4/2017 11:31:09 AM	S42546
Surr: Toluene-d8	99.4	70-130		%Rec	10	5/4/2017 11:31:09 AM	S42546

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:** West Wall (South) 10'-14'
Project: Barnes B 3A **Collection Date:** 5/3/2017 1:37:00 PM
Lab ID: 1705215-003 **Matrix:** MEOH (SOIL) **Received Date:** 5/4/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	5/4/2017 11:27:31 AM	31565
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	21		mg/Kg	5	5/4/2017 11:59:44 AM	G42546
Surr: BFB	98.9	70-130		%Rec	5	5/4/2017 11:59:44 AM	G42546
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/4/2017 10:30:52 AM	31563
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/4/2017 10:30:52 AM	31563
Surr: DNOP	105	70-130		%Rec	1	5/4/2017 10:30:52 AM	31563
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.11		mg/Kg	5	5/4/2017 11:59:44 AM	S42546
Toluene	ND	0.21		mg/Kg	5	5/4/2017 11:59:44 AM	S42546
Ethylbenzene	ND	0.21		mg/Kg	5	5/4/2017 11:59:44 AM	S42546
Xylenes, Total	ND	0.43		mg/Kg	5	5/4/2017 11:59:44 AM	S42546
Surr: 1,2-Dichloroethane-d4	93.6	70-130		%Rec	5	5/4/2017 11:59:44 AM	S42546
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	5	5/4/2017 11:59:44 AM	S42546
Surr: Dibromofluoromethane	94.6	70-130		%Rec	5	5/4/2017 11:59:44 AM	S42546
Surr: Toluene-d8	96.5	70-130		%Rec	5	5/4/2017 11:59:44 AM	S42546

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
 Project: Barnes B 3A
 Lab ID: 1705215-004

Client Sample ID: South Wall (East) 8'-14'
 Collection Date: 5/3/2017 1:45:00 PM
 Matrix: MEOH (SOIL) Received Date: 5/4/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	5/4/2017 11:39:55 AM	31565
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	18		mg/Kg	5	5/4/2017 12:28:22 PM	G42546
Surr: BFB	99.8	70-130		%Rec	5	5/4/2017 12:28:22 PM	G42546
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/4/2017 10:53:01 AM	31563
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/4/2017 10:53:01 AM	31563
Surr: DNOP	103	70-130		%Rec	1	5/4/2017 10:53:01 AM	31563
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.091		mg/Kg	5	5/4/2017 12:28:22 PM	S42546
Toluene	ND	0.18		mg/Kg	5	5/4/2017 12:28:22 PM	S42546
Ethylbenzene	ND	0.18		mg/Kg	5	5/4/2017 12:28:22 PM	S42546
Xylenes, Total	ND	0.37		mg/Kg	5	5/4/2017 12:28:22 PM	S42546
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%Rec	5	5/4/2017 12:28:22 PM	S42546
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	5	5/4/2017 12:28:22 PM	S42546
Surr: Dibromofluoromethane	96.4	70-130		%Rec	5	5/4/2017 12:28:22 PM	S42546
Surr: Toluene-d8	98.1	70-130		%Rec	5	5/4/2017 12:28:22 PM	S42546

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 1705215

Date Reported: 5/5/2017

CLIENT: Blagg Engineering

Client Sample ID: South Base @ 18'

Project: Barnes B 3A

Collection Date: 5/3/2017 1:50:00 PM

Lab ID: 1705215-005

Matrix: MEOH (SOIL)

Received Date: 5/4/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	5/4/2017 11:52:20 AM	31565
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	17		mg/Kg	5	5/4/2017 12:56:52 PM	G42546
Surr: BFB	103	70-130		%Rec	5	5/4/2017 12:56:52 PM	G42546
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/4/2017 11:14:54 AM	31563
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	5/4/2017 11:14:54 AM	31563
Surr: DNOP	106	70-130		%Rec	1	5/4/2017 11:14:54 AM	31563
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.086		mg/Kg	5	5/4/2017 12:56:52 PM	S42546
Toluene	ND	0.17		mg/Kg	5	5/4/2017 12:56:52 PM	S42546
Ethylbenzene	ND	0.17		mg/Kg	5	5/4/2017 12:56:52 PM	S42546
Xylenes, Total	ND	0.35		mg/Kg	5	5/4/2017 12:56:52 PM	S42546
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%Rec	5	5/4/2017 12:56:52 PM	S42546
Surr: 4-Bromofluorobenzene	94.4	70-130		%Rec	5	5/4/2017 12:56:52 PM	S42546
Surr: Dibromofluoromethane	92.9	70-130		%Rec	5	5/4/2017 12:56:52 PM	S42546
Surr: Toluene-d8	99.2	70-130		%Rec	5	5/4/2017 12:56:52 PM	S42546

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 1705215

Date Reported: 5/5/2017

CLIENT: Blagg Engineering

Client Sample ID: North Base @ 17'-18

Project: Barnes B 3A

Collection Date: 5/3/2017 2:06:00 PM

Lab ID: 1705215-006

Matrix: MEOH (SOIL)

Received Date: 5/4/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	5/4/2017 12:04:44	31565
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	18		mg/Kg	5	5/4/2017 1:25:25 PM	G42546
Surr: BFB	100	70-130		%Rec	5	5/4/2017 1:25:25 PM	G42546
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/4/2017 11:36:54 AM	31563
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/4/2017 11:36:54 AM	31563
Surr: DNOP	99.5	70-130		%Rec	1	5/4/2017 11:36:54 AM	31563
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.088		mg/Kg	5	5/4/2017 1:25:25 PM	S42546
Toluene	ND	0.18		mg/Kg	5	5/4/2017 1:25:25 PM	S42546
Ethylbenzene	ND	0.18		mg/Kg	5	5/4/2017 1:25:25 PM	S42546
Xylenes, Total	ND	0.35		mg/Kg	5	5/4/2017 1:25:25 PM	S42546
Surr: 1,2-Dichloroethane-d4	93.6	70-130		%Rec	5	5/4/2017 1:25:25 PM	S42546
Surr: 4-Bromofluorobenzene	98.8	70-130		%Rec	5	5/4/2017 1:25:25 PM	S42546
Surr: Dibromofluoromethane	95.8	70-130		%Rec	5	5/4/2017 1:25:25 PM	S42546
Surr: Toluene-d8	99.2	70-130		%Rec	5	5/4/2017 1:25:25 PM	S42546

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1705215
 05-May-17

Client: Blagg Engineering
Project: Barnes B 3A

Sample ID	MB-31565	SampType:	mbk	TestCode:	EPA Method 300.0: Anlons					
Client ID:	PBS	Batch ID:	31565	RunNo:	42548					
Prep Date:	5/4/2017	Analysis Date:	5/4/2017	SeqNo:	1339022	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride ND 1.5

Sample ID	LCS-31565	SampType:	Ics	TestCode:	EPA Method 300.0: Anlons					
Client ID:	LCSS	Batch ID:	31565	RunNo:	42548					
Prep Date:	5/4/2017	Analysis Date:	5/4/2017	SeqNo:	1339023	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride 14 1.5 15.00 0 96.1 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#: 1705215

05-May-17

Client: Blagg Engineering
Project: Barnes B 3A

Sample ID	MB-31564	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	31564	RunNo:	42525					
Prep Date:	5/4/2017	Analysis Date:	5/4/2017	SeqNo:	1337677	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.1		10.00		81.1	70	130			

Sample ID	LCS-31564	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	31564	RunNo:	42525					
Prep Date:	5/4/2017	Analysis Date:	5/4/2017	SeqNo:	1337679	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		92.2	70	130			

Sample ID	LCS-31563	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	31563	RunNo:	42534					
Prep Date:	5/4/2017	Analysis Date:	5/4/2017	SeqNo:	1337721	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	95.9	63.8	116			
Surr: DNOP	4.8		5.000		95.2	70	130			

Sample ID	MB-31563	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	31563	RunNo:	42534					
Prep Date:	5/4/2017	Analysis Date:	5/4/2017	SeqNo:	1337722	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		105	70	130			

Sample ID	1705215-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	East Wall (North) 8'-	Batch ID:	31563	RunNo:	42534					
Prep Date:	5/4/2017	Analysis Date:	5/4/2017	SeqNo:	1338263	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.7	48.45	5.029	91.8	51.6	130			
Surr: DNOP	4.9		4.845		102	70	130			

Sample ID	1705215-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	East Wall (North) 8'-	Batch ID:	31563	RunNo:	42534					
Prep Date:	5/4/2017	Analysis Date:	5/4/2017	SeqNo:	1338264	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.7	48.73	5.029	91.9	51.6	130	0.605	20	

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#: 1705215
05-May-17

Client: Blagg Engineering
Project: Barnes B 3A

Sample ID	1705215-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	East Wall (North) 8'-	Batch ID:	31563	RunNo:	42534					
Prep Date:	5/4/2017	Analysis Date:	5/4/2017	SeqNo:	1338264	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		4.873		99.5	70	130	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#: 1705215

05-May-17

Client: Blagg Engineering
Project: Barnes B 3A

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: S42546	RunNo: 42546								
Prep Date:	Analysis Date: 5/4/2017	SeqNo: 1338517	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: 1,2-Dichloroethane-d4	0.48		0.5000		95.1	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.1	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		95.6	70	130			
Surr: Toluene-d8	0.49		0.5000		98.5	70	130			

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSS	Batch ID: S42546	RunNo: 42546								
Prep Date:	Analysis Date: 5/4/2017	SeqNo: 1338518	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	99.8	70	130			
Toluene	0.98	0.050	1.000	0	97.8	70	130			
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		96.7	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.8	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		95.3	70	130			
Surr: Toluene-d8	0.49		0.5000		98.8	70	130			

Sample ID 1705215-002ams	SampType: MS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: North Wall & NW 10'	Batch ID: S42546	RunNo: 42546								
Prep Date:	Analysis Date: 5/4/2017	SeqNo: 1338519	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	7.8	0.20	7.880	0	99.0	61.9	146			
Toluene	7.4	0.39	7.880	0	94.4	70	130			
Surr: 1,2-Dichloroethane-d4	3.8		3.940		95.3	70	130			
Surr: 4-Bromofluorobenzene	3.7		3.940		95.1	70	130			
Surr: Dibromofluoromethane	3.9		3.940		98.5	70	130			
Surr: Toluene-d8	3.8		3.940		97.6	70	130			

Sample ID 1705215-002amsd	SampType: MSD	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: North Wall & NW 10'	Batch ID: S42546	RunNo: 42546								
Prep Date:	Analysis Date: 5/4/2017	SeqNo: 1338520	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	7.7	0.20	7.880	0	97.9	61.9	146	1.11	20	
Toluene	7.4	0.39	7.880	0	94.4	70	130	0.0455	20	

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#: 1705215

05-May-17

Client: Blagg Engineering
Project: Barnes B 3A

Sample ID	1705215-002amsd	SampType:	MSD	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	North Wall & NW 10'	Batch ID:	S42546	RunNo:	42546					
Prep Date:		Analysis Date:	5/4/2017	SeqNo:	1338520	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	3.8		3.940		97.2	70	130	0	0	
Surr: 4-Bromofluorobenzene	3.9		3.940		99.6	70	130	0	0	
Surr: Dibromofluoromethane	3.8		3.940		96.7	70	130	0	0	
Surr: Toluene-d8	3.9		3.940		98.8	70	130	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#: 1705215

05-May-17

Client: Blagg Engineering
Project: Barnes B 3A

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	PBS	Batch ID:	G42546	RunNo:	42546					
Prep Date:		Analysis Date:	5/4/2017	SeqNo:	1338526	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	490		500.0		98.4	70	130			

Sample ID	2.5ug gro lcs	SampType:	LCS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS	Batch ID:	G42546	RunNo:	42546					
Prep Date:		Analysis Date:	5/4/2017	SeqNo:	1338527	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics (GRO)	27	5.0	25.00	0	106	70	130			
Surr: BFB	510		500.0		102	70	130			

Sample ID	1705215-001ams	SampType:	MS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	East Wall (North) 8'-	Batch ID:	G42546	RunNo:	42546					
Prep Date:		Analysis Date:	5/4/2017	SeqNo:	1338528	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics (GRO)	110	19	93.42	6.577	111	63.2	128			
Surr: BFB	1900		1868		104	70	130			

Sample ID	1705215-001amsd	SampType:	MSD	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	East Wall (North) 8'-	Batch ID:	G42546	RunNo:	42546					
Prep Date:		Analysis Date:	5/4/2017	SeqNo:	1338529	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics (GRO)	100	19	93.42	6.577	103	63.2	128	7.68	20	
Surr: BFB	1900		1868		99.2	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



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

Sample Log-In Check List

Client Name: **BLAGG**

Work Order Number: 1705215

RcptNo: 1

Received By: **Ashley Gallegos** 5/4/2017 7:00:00 AM
 Completed By: **Ashley Gallegos** 5/4/2017 7:28:23 AM
 Reviewed By: **ENM** 05/04/17

[Handwritten initials]

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? Yes ✓ No # of preserved bottles checked for pH: (<2 or >12 unless noted)
- (Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes ✓ No Adjusted?
- 14. Is it clear what analyses were requested? Yes ✓ No
- 15. Were all holding times able to be met? Yes ✓ No Checked by:
- (If no, notify customer for authorization.)

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	1.6	Good	Yes			

Chain-of-Custody Record

Client: **BP AMERICA**

Mailing Address: **BATE ENGINEERING INC**

Phone #: **(505) 320-1193**

email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other

EDD (Type)

Turn-Around Time:

SAME DAY

Standard Rush

Project Name:

BARNES B 3A

Project #:

Project Manager:

J. Barick

Sampler: **J. Barick**

On Ice: Yes No

Sample Temperature: **11+0.5(C) = 11.0**

Container Type and #

4oz x 1

Preservative Type

COOL

HEAL No.:

1705215

Date: **5/3/2017**

Time: **1315**

Matrix: **SOIL**

Sample Request ID: **EAST WALL (NORTH) 8'-14' NORTH WALL 9' NW 10'-15'**

Date: **5/3/2017**

Time: **1325**

Matrix: **SOIL**

Sample Request ID: **WEST WALL (SOUTH) 10'-14'**

Date: **5/3/2017**

Time: **1345**

Matrix: **SOIL**

Sample Request ID: **SOUTH WALL (EAST) 9'-14'**

Date: **5/3/2017**

Time: **1350**

Matrix: **SOIL**

Sample Request ID: **SOUTH Base @ 18'**

Date: **5/3/2017**

Time: **1406**

Matrix: **SOIL**

Sample Request ID: **NORTH Base @ 17'-18'**

Date: **5/3/2017**

Time: **1650**

Matrix: **SOIL**

Sample Request ID: **RELIQUISHED BY: JEFF BLODY**

Date: **5/3/17**

Time: **1858**

Matrix: **SOIL**

Sample Request ID: **RELIQUISHED BY: CHRISTOPHER LEBEL**

Received by:

AMIT KHALI

Date:

5/3/17

Time:

1650

Received by:

OSI/DA/17

Remarks:

BU BURN

Remarks:

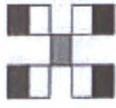
VD: VHXONENR4

Remarks:

WBS ELEMENT: LI-0018M-E:22SIS

Remarks:

CAUTION: STEVE MARK



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel: 505-345-3975 Fax: 505-345-4107

Analysis Request

Air Bubbles (Y or N)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This gives 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

May 09, 2017

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

RE: Barnes B 3A

OrderNo.: 1705310

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 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 white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering **Client Sample ID:** TSP-1
Project: Barnes B 3A **Collection Date:** 5/4/2017 2:58:00 PM
Lab ID: 1705310-001 **Matrix:** MEOH (SOIL) **Received Date:** 5/5/2017 6:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	5/5/2017 10:08:41 AM	31587
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/5/2017 9:44:08 AM	31585
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/5/2017 9:44:08 AM	31585
Surr: DNOP	103	70-130		%Rec	1	5/5/2017 9:44:08 AM	31585
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	29	17		mg/Kg	5	5/5/2017 12:38:55 PM	G42578
Surr: BFB	138	54-150		%Rec	5	5/5/2017 12:38:55 PM	G42578
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.087		mg/Kg	5	5/5/2017 12:38:55 PM	B42578
Toluene	ND	0.17		mg/Kg	5	5/5/2017 12:38:55 PM	B42578
Ethylbenzene	ND	0.17		mg/Kg	5	5/5/2017 12:38:55 PM	B42578
Xylenes, Total	0.78	0.35		mg/Kg	5	5/5/2017 12:38:55 PM	B42578
Surr: 4-Bromofluorobenzene	109	66.6-132		%Rec	5	5/5/2017 12:38:55 PM	B42578

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 1705310
 Date Reported: 5/9/2017

CLIENT: Blagg Engineering

Client Sample ID: TSP-3

Project: Barnes B 3A

Collection Date: 5/4/2017 3:07:00 PM

Lab ID: 1705310-003

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	5/5/2017 10:33:30 AM	31587
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	16	10		mg/Kg	1	5/5/2017 10:28:28 AM	31585
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/5/2017 10:28:28 AM	31585
Surr: DNOP	111	70-130		%Rec	1	5/5/2017 10:28:28 AM	31585
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	73	28		mg/Kg	5	5/5/2017 9:54:21 AM	G42578
Surr: BFB	179	54-150	S	%Rec	5	5/5/2017 9:54:21 AM	G42578
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.14		mg/Kg	5	5/5/2017 9:54:21 AM	B42578
Toluene	ND	0.28		mg/Kg	5	5/5/2017 9:54:21 AM	B42578
Ethylbenzene	ND	0.28		mg/Kg	5	5/5/2017 9:54:21 AM	B42578
Xylenes, Total	0.72	0.57		mg/Kg	5	5/5/2017 9:54:21 AM	B42578
Surr: 4-Bromofluorobenzene	113	66.6-132		%Rec	5	5/5/2017 9:54:21 AM	B42578

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 1705310

Date Reported: 5/9/2017

CLIENT: Blagg Engineering

Client Sample ID: TSP-4

Project: Barnes B 3A

Collection Date: 5/4/2017 3:11:00 PM

Lab ID: 1705310-004

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	5/5/2017 10:45:55 AM	31587
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	17	9.9		mg/Kg	1	5/5/2017 10:50:45 AM	31585
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/5/2017 10:50:45 AM	31585
Surr: DNOP	108	70-130		%Rec	1	5/5/2017 10:50:45 AM	31585
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	110	23		mg/Kg	5	5/5/2017 1:02:20 PM	G42578
Surr: BFB	226	54-150	S	%Rec	5	5/5/2017 1:02:20 PM	G42578
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.11		mg/Kg	5	5/5/2017 1:02:20 PM	B42578
Toluene	ND	0.23		mg/Kg	5	5/5/2017 1:02:20 PM	B42578
Ethylbenzene	0.27	0.23		mg/Kg	5	5/5/2017 1:02:20 PM	B42578
Xylenes, Total	2.4	0.46		mg/Kg	5	5/5/2017 1:02:20 PM	B42578
Surr: 4-Bromofluorobenzene	114	66.6-132		%Rec	5	5/5/2017 1:02:20 PM	B42578

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 1705310

Date Reported: 5/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-5

Project: Barnes B 3A

Collection Date: 5/4/2017 3:15:00 PM

Lab ID: 1705310-005

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	5/5/2017 10:58:20 AM	31587
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	9.7	9.5		mg/Kg	1	5/5/2017 11:13:07 AM	31585
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/5/2017 11:13:07 AM	31585
Surr: DNOP	107	70-130		%Rec	1	5/5/2017 11:13:07 AM	31585
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	59	21		mg/Kg	5	5/5/2017 10:17:48 AM	G42578
Surr: BFB	179	54-150	S	%Rec	5	5/5/2017 10:17:48 AM	G42578
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.11		mg/Kg	5	5/5/2017 10:17:48 AM	B42578
Toluene	ND	0.21		mg/Kg	5	5/5/2017 10:17:48 AM	B42578
Ethylbenzene	ND	0.21		mg/Kg	5	5/5/2017 10:17:48 AM	B42578
Xylenes, Total	0.71	0.42		mg/Kg	5	5/5/2017 10:17:48 AM	B42578
Surr: 4-Bromofluorobenzene	111	66.6-132		%Rec	5	5/5/2017 10:17:48 AM	B42578

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 1705310

Date Reported: 5/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-6

Project: Barnes B 3A

Collection Date: 5/4/2017 3:20:00 PM

Lab ID: 1705310-006

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	5/5/2017 11:10:44 AM	31587
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	18	9.8		mg/Kg	1	5/5/2017 11:35:09 AM	31585
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/5/2017 11:35:09 AM	31585
Surr: DNOP	110	70-130		%Rec	1	5/5/2017 11:35:09 AM	31585
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	36	21		mg/Kg	5	5/5/2017 10:41:17 AM	G42578
Surr: BFB	154	54-150	S	%Rec	5	5/5/2017 10:41:17 AM	G42578
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.10		mg/Kg	5	5/5/2017 10:41:17 AM	B42578
Toluene	ND	0.21		mg/Kg	5	5/5/2017 10:41:17 AM	B42578
Ethylbenzene	ND	0.21		mg/Kg	5	5/5/2017 10:41:17 AM	B42578
Xylenes, Total	ND	0.42		mg/Kg	5	5/5/2017 10:41:17 AM	B42578
Surr: 4-Bromofluorobenzene	110	66.6-132		%Rec	5	5/5/2017 10:41:17 AM	B42578

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 1705310

Date Reported: 5/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-7

Project: Barnes B 3A

Collection Date: 5/4/2017 3:24:00 PM

Lab ID: 1705310-007

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	5/5/2017 11:23:09 AM	31587
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	13	9.7		mg/Kg	1	5/5/2017 11:57:12 AM	31585
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/5/2017 11:57:12 AM	31585
Surr: DNOP	112	70-130		%Rec	1	5/5/2017 11:57:12 AM	31585
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	27	17		mg/Kg	5	5/5/2017 11:04:51 AM	G42578
Surr: BFB	143	54-150		%Rec	5	5/5/2017 11:04:51 AM	G42578
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.086		mg/Kg	5	5/5/2017 11:04:51 AM	B42578
Toluene	ND	0.17		mg/Kg	5	5/5/2017 11:04:51 AM	B42578
Ethylbenzene	ND	0.17		mg/Kg	5	5/5/2017 11:04:51 AM	B42578
Xylenes, Total	0.35	0.34		mg/Kg	5	5/5/2017 11:04:51 AM	B42578
Surr: 4-Bromofluorobenzene	109	66.6-132		%Rec	5	5/5/2017 11:04:51 AM	B42578

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 1705310

Date Reported: 5/9/2017

CLIENT: Blagg Engineering

Client Sample ID: TSP-8

Project: Barnes B 3A

Collection Date: 5/4/2017 3:30:00 PM

Lab ID: 1705310-008

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	5/5/2017 11:35:33 AM	31587
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	16	9.3		mg/Kg	1	5/5/2017 12:19:01 PM	31585
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/5/2017 12:19:01 PM	31585
Surr: DNOP	114	70-130		%Rec	1	5/5/2017 12:19:01 PM	31585
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	69	19		mg/Kg	5	5/5/2017 11:28:22 AM	G42578
Surr: BFB	195	54-150	S	%Rec	5	5/5/2017 11:28:22 AM	G42578
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.094		mg/Kg	5	5/5/2017 11:28:22 AM	B42578
Toluene	ND	0.19		mg/Kg	5	5/5/2017 11:28:22 AM	B42578
Ethylbenzene	ND	0.19		mg/Kg	5	5/5/2017 11:28:22 AM	B42578
Xylenes, Total	1.7	0.38		mg/Kg	5	5/5/2017 11:28:22 AM	B42578
Surr: 4-Bromofluorobenzene	112	66.6-132		%Rec	5	5/5/2017 11:28:22 AM	B42578

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 1705310

Date Reported: 5/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-9

Project: Barnes B 3A

Collection Date: 5/4/2017 3:35:00 PM

Lab ID: 1705310-009

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	5/5/2017 12:12:47 PM	31587
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	16	9.9		mg/Kg	1	5/5/2017 12:41:02 PM	31585
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/5/2017 12:41:02 PM	31585
Surr: DNOP	106	70-130		%Rec	1	5/5/2017 12:41:02 PM	31585
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	50	20		mg/Kg	5	5/5/2017 11:51:56 AM	G42578
Surr: BFB	174	54-150	S	%Rec	5	5/5/2017 11:51:56 AM	G42578
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.099		mg/Kg	5	5/5/2017 11:51:56 AM	B42578
Toluene	ND	0.20		mg/Kg	5	5/5/2017 11:51:56 AM	B42578
Ethylbenzene	ND	0.20		mg/Kg	5	5/5/2017 11:51:56 AM	B42578
Xylenes, Total	0.41	0.40		mg/Kg	5	5/5/2017 11:51:56 AM	B42578
Surr: 4-Bromofluorobenzene	108	66.6-132		%Rec	5	5/5/2017 11:51:56 AM	B42578

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 1705310

Date Reported: 5/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-10

Project: Barnes B 3A

Collection Date: 5/4/2017 3:40:00 PM

Lab ID: 1705310-010

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	5/5/2017 12:25:12 PM	31587
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/5/2017 1:02:55 PM	31585
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/5/2017 1:02:55 PM	31585
Surr: DNOP	106	70-130		%Rec	1	5/5/2017 1:02:55 PM	31585
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	22		mg/Kg	5	5/5/2017 12:15:26 PM	G42578
Surr: BFB	114	54-150		%Rec	5	5/5/2017 12:15:26 PM	G42578
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.11		mg/Kg	5	5/5/2017 12:15:26 PM	B42578
Toluene	ND	0.22		mg/Kg	5	5/5/2017 12:15:26 PM	B42578
Ethylbenzene	ND	0.22		mg/Kg	5	5/5/2017 12:15:26 PM	B42578
Xylenes, Total	ND	0.45		mg/Kg	5	5/5/2017 12:15:26 PM	B42578
Surr: 4-Bromofluorobenzene	109	66.6-132		%Rec	5	5/5/2017 12:15:26 PM	B42578

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705310

09-May-17

Client: Blagg Engineering

Project: Barnes B 3A

Sample ID	MB-31587	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31587	RunNo:	42576					
Prep Date:	5/5/2017	Analysis Date:	5/5/2017	SeqNo:	1339823	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31587	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31587	RunNo:	42576					
Prep Date:	5/5/2017	Analysis Date:	5/5/2017	SeqNo:	1339824	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.6	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#: 1705310

09-May-17

Client: Blagg Engineering
Project: Barnes B 3A

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			

Sample ID	1705310-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-1	Batch ID:	31585	RunNo:	42570					
Prep Date:	5/5/2017	Analysis Date:	5/5/2017	SeqNo:	1339527	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.1	45.54	8.175	77.5	51.6	130			
Surr: DNOP	4.5		4.554		99.6	70	130			

Sample ID	1705310-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-1	Batch ID:	31585	RunNo:	42570					
Prep Date:	5/5/2017	Analysis Date:	5/5/2017	SeqNo:	1339528	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.8	48.78	8.175	81.1	51.6	130	9.40	20	
Surr: DNOP	4.9		4.878		101	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#: 1705310

09-May-17

Client: Blagg Engineering

Project: Barnes B 3A

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: G42578		RunNo: 42578							
Prep Date:	Analysis Date: 5/5/2017		SeqNo: 1339480		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	940		1000		93.5	54	150			

Sample ID 2.5UG GRO LCS	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: G42578		RunNo: 42578							
Prep Date:	Analysis Date: 5/5/2017		SeqNo: 1339481		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.4	76.4	125			
Surr: BFB	1000		1000		101	54	150			

Sample ID 1705310-002AMS	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: TSP-2	Batch ID: G42578		RunNo: 42578							
Prep Date:	Analysis Date: 5/5/2017		SeqNo: 1339482		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	190	28	142.0	45.62	102	61.3	150			
Surr: BFB	9400		5682		165	54	150			S

Sample ID 1705310-002AMSD	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: TSP-2	Batch ID: G42578		RunNo: 42578							
Prep Date:	Analysis Date: 5/5/2017		SeqNo: 1339483		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	200	28	142.0	45.62	109	61.3	150	4.94	20	
Surr: BFB	9400		5682		166	54	150	0	0	S

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#: 1705310

09-May-17

Client: Blagg Engineering

Project: Barnes B 3A

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: B42578		RunNo: 42578							
Prep Date:	Analysis Date: 5/5/2017		SeqNo: 1339487		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		105	66.6	132			

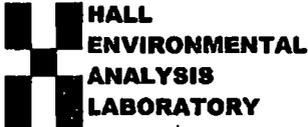
Sample ID 100NG BTEX LCS	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: B42578		RunNo: 42578							
Prep Date:	Analysis Date: 5/5/2017		SeqNo: 1339488		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	87.0	80	120			
Toluene	0.89	0.050	1.000	0	89.4	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.9	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	66.6	132			

Sample ID 1705310-003AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: TSP-3	Batch ID: B42578		RunNo: 42578							
Prep Date:	Analysis Date: 5/5/2017		SeqNo: 1339489		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.7	0.11	4.516	0	104	61.5	138			
Toluene	4.6	0.23	4.516	0.1047	100	71.4	127			
Ethylbenzene	4.7	0.23	4.516	0.2090	99.9	70.9	132			
Xylenes, Total	15	0.45	13.55	0.7175	102	76.2	123			
Surr: 4-Bromofluorobenzene	5.2		4.516		116	66.6	132			

Sample ID 1705310-003AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: TSP-3	Batch ID: B42578		RunNo: 42578							
Prep Date:	Analysis Date: 5/5/2017		SeqNo: 1339490		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.3	0.11	4.516	0	95.7	61.5	138	7.94	20	
Toluene	4.4	0.23	4.516	0.1047	95.2	71.4	127	4.89	20	
Ethylbenzene	4.6	0.23	4.516	0.2090	96.4	70.9	132	3.47	20	
Xylenes, Total	14	0.45	13.55	0.7175	99.2	76.2	123	2.69	20	
Surr: 4-Bromofluorobenzene	5.2		4.516		116	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: **1705310**

RcptNo: **1**

Received By: **Ashley Gallegos** 5/5/2017 8:45:00 AM *AG*

Completed By: **Ashley Gallegos** 5/5/2017 7:01:38 AM *AG*

Reviewed By: *pre* 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: (<2 or >12 unless noted)
- 12. Does paperwork match bottle labels? Yes ✓ No Adjusted? (Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes ✓ No
- 14. Is it clear what analyses were requested? Yes ✓ No
- 15. Were all holding times able to be met? Yes ✓ No Checked by: (If no, notify customer for authorization.)

Special Handling (if applicable)

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

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

17. Additional remarks:

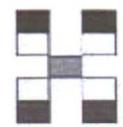
18. Cooler Information

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:
BARNES B 3A
 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 + TPH (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE	Air Bubbles (Y or N)
5/4/17	1458	SOIL	TSP-1	402-1	COOL	1705310-001	X	X										X	
	1503		TSP-2			-002													
	1507		TSP-3			-003													
	1511		TSP-4			-004													
	1515		TSP-5			-005													
	1520		TSP-6			-006													
	1524		TSP-7			-007													
	1530		TSP-8			-008													
	1535		TSP-9			-009													
	1540		TSP-10			-010													

Date: 5/4/17 Time: 1925 Relinquished by: *J. Blagg* Received by: *Christine Wall* Date: 5/4/17 Time: 1925
 Date: 5/4/17 Time: 2037 Relinquished by: *Christine Wall* Received by: *Christine Wall* Date: 05/05/17 Time: 0645
 Remarks: **BUK BP** CONTACT: STEVE MOSKAL
VID: VHIXONEVRM
WBS ELEMENT: L1-0018M-E:22515

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

May 09, 2017

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

RE: BARNES B 3A

OrderNo.: 1705372

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/6/2017 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 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 white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1705372

Date Reported: 5/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-11-12-13 Composite

Project: BARNES B 3A

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

Lab ID: 1705372-001

Matrix: SOIL

Received Date: 5/6/2017 11:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	5/8/2017 10:38:06 AM	31611
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	12	9.8		mg/Kg	1	5/8/2017 10:39:36 AM	31607
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/8/2017 10:39:36 AM	31607
Surr: DNOP	111	70-130		%Rec	1	5/8/2017 10:39:36 AM	31607
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	58	20		mg/Kg	5	5/8/2017 9:46:26 AM	G42607
Surr: BFB	190	54-150	S	%Rec	5	5/8/2017 9:46:26 AM	G42607
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.098		mg/Kg	5	5/8/2017 9:46:26 AM	B42607
Toluene	ND	0.20		mg/Kg	5	5/8/2017 9:46:26 AM	B42607
Ethylbenzene	ND	0.20		mg/Kg	5	5/8/2017 9:46:26 AM	B42607
Xylenes, Total	0.45	0.39		mg/Kg	5	5/8/2017 9:46:26 AM	B42607
Surr: 4-Bromofluorobenzene	110	66.6-132		%Rec	5	5/8/2017 9:46:26 AM	B42607

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 1705372

Date Reported: 5/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP 14-15-16-17 Composite

Project: BARNES B 3A

Collection Date: 5/5/2017 12:24:00 PM

Lab ID: 1705372-002

Matrix: SOIL

Received Date: 5/6/2017 11:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	5/8/2017 10:50:31 AM	31611
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/8/2017 11:01:57 AM	31607
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/8/2017 11:01:57 AM	31607
Surr: DNOP	111	70-130		%Rec	1	5/8/2017 11:01:57 AM	31607
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	47	17		mg/Kg	5	5/8/2017 10:10:00 AM	G42607
Surr: BFB	181	54-150	S	%Rec	5	5/8/2017 10:10:00 AM	G42607
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.085		mg/Kg	5	5/8/2017 10:10:00 AM	B42607
Toluene	ND	0.17		mg/Kg	5	5/8/2017 10:10:00 AM	B42607
Ethylbenzene	ND	0.17		mg/Kg	5	5/8/2017 10:10:00 AM	B42607
Xylenes, Total	0.38	0.34		mg/Kg	5	5/8/2017 10:10:00 AM	B42607
Surr: 4-Bromofluorobenzene	111	66.6-132		%Rec	5	5/8/2017 10:10:00 AM	B42607

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705372

09-May-17

Client: Blagg Engineering

Project: BARNES B 3A

Sample ID	MB-31611	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31611	RunNo:	42600					
Prep Date:	5/8/2017	Analysis Date:	5/8/2017	SeqNo:	1340844	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31611	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31611	RunNo:	42600					
Prep Date:	5/8/2017	Analysis Date:	5/8/2017	SeqNo:	1340845	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.8	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#: 1705372

09-May-17

Client: Blagg Engineering

Project: BARNES B 3A

Sample ID	LCS-31607	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	31607	RunNo:	42598					
Prep Date:	5/8/2017	Analysis Date:	5/8/2017	SeqNo:	1340061	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	96.7	63.8	116			
Surr: DNOP	4.9		5.000		97.3	70	130			

Sample ID	MB-31607	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	31607	RunNo:	42598					
Prep Date:	5/8/2017	Analysis Date:	5/8/2017	SeqNo:	1340062	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		105	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#: 1705372

09-May-17

Client: Blagg Engineering

Project: BARNES B 3A

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: G42607		RunNo: 42607							
Prep Date:	Analysis Date: 5/8/2017		SeqNo: 1340647		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		95.7	54	150			

Sample ID 2.5UG GRO LCS	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: G42607		RunNo: 42607							
Prep Date:	Analysis Date: 5/8/2017		SeqNo: 1340648		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	90.0	76.4	125			
Surr: BFB	1000		1000		103	54	150			

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#: 1705372
09-May-17

Client: Blagg Engineering
Project: BARNES B 3A

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: B42607		RunNo: 42607							
Prep Date:	Analysis Date: 5/8/2017		SeqNo: 1340653		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		106	66.6	132			

Sample ID 100NG BTEX LCS	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: B42607		RunNo: 42607							
Prep Date:	Analysis Date: 5/8/2017		SeqNo: 1340654		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.4	80	120			
Toluene	0.88	0.050	1.000	0	87.8	80	120			
Ethylbenzene	0.91	0.050	1.000	0	90.7	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.1	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	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 |



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 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: **1705372**

RcptNo: **1**

Received By: **Andy Freeman**

5/8/2017 11:20:00 AM

Andy Freeman

Completed By: **Anna Thorne**

5/8/2017 8:14:25 AM

Anna Thorne

Reviewed By: *[Signature]*

05/08/17

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?
(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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.9	Good	Yes			

