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

Revised August 8, 2011

abmit 1 Copy to appropriate District Office in

Form C-141

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

Release Notificati	on and Corrective Action								
OPER	RATOR 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	er: Federal API No. 3004522515								
	ON OF RELEASE								
Unit Letter Section Township Range Feet from the No D 27 32N 11W 860 No	rth/South Line   Feet from the rth   East/West Line   County: San Juan   West								
Latitude <u>36.960642°</u>	Longitude <u>-107.981739°</u>								
NATUR	RE 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 BG									
	unknown 2017								
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Requir	If YES, To Whom?								
By Whom? Steve Moskal	Date and Hour:								
Was a Watercourse Reached?  ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. OIL CONS. DIV DIST. 3								
If a Watercourse was Impacted, Describe Fully.*	AUG 0 9 2017								
Describe Cause of Problem and Remedial Action Taken.* During consthe tank. The impacted soil was remediated via excavation and treated	struction operations to replace the onsite BGTs impacted soil was discovered below on site via soil shredding. The extents were completely delineated.								
	cavated measured 53'x30'x18' deep with a total of 1,700 cubic yards of soil no further action required. Attached is a field report and laboratory results.								
regulations all operators are required to report and/or file certain releas public health or the environment. The acceptance of a C-141 report by should their operations have failed to adequately investigate and remed	to the best of my knowledge and understand that pursuant to NMOCD rules and e notifications and perform corrective actions for releases which may endanger the NMOCD marked as "Final Report" does not relieve the operator of liability liate contamination that pose a threat to ground water, surface water, human health rt does not relieve the operator of responsibility for compliance with any other								
Signature: Muss Muss	OIL CONSERVATION DIVISION								
Printed Name: Steve Moskal	Approved by Environmental Specialist:								
Title: Field Environmental Coordinator	Approval Date: 9/13/17 Expiration Date:								
E-mail Address: steven.moskal@bp.com	Conditions of Approval:								
Date: August 8, 2017 Phone: 505-326-9497									

\* Attach Additional Sheets If Necessary

#NUF 17118 49918



# 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:

				Field		TPH	TPH	TPH	TPH	<u> </u>
Pile ID	Volume	Date	Date	OVM	BTEX	GRO	DRO	MRO	Total	Chloride
	(CY)	Created	Sampled	(ppm)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(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



# 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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Only

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1705215

Date Reported: 5/5/2017

### Hall Environmental Analysis Laboratory, Inc.

**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 Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS			- · · · · ·		Analysi	: LGT
Chloride	ND	30	mg/Kg	20	5/4/2017 11:02:42 AM	31565
EPA METHOD 8015D MOD: GASOL	INE 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 RA	NGE 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.

- 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 Page 1 of 12
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1705215

Date Reported: 5/5/2017

### 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 Qu	ıal 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: GASOL	INE RANGE				Analyst	:: DJF
Gasoline Range Organics (GRO)	580	39	mg/Kg	10	5/4/2017 11:31:09 AM	G42546
Sur: BFB	101	70-130	%Rec	10	5/4/2017 11:31:09 AM	G42546
EPA METHOD 8015M/D: DIESEL RA	NGE 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.

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ē Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 12 J
- Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1705215

Date Reported: 5/5/2017

### 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 Qu	al 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: GASOL	INE 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 RA	NGE 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.

- 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 Page 3 of 12
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1705215

Date Reported: 5/5/2017

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Barnes B 3A

Lab ID: 1705215-004

Project:

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 Qu	al 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: GASOL	INE 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 RA	NGE 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.

- 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 Page 4 of 12
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1705215

Date Reported: 5/5/2017

### Hall Environmental Analysis Laboratory, Inc.

**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 Qu	al 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: GASOL	INE 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 RA	NGE 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.

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 12 J
- Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1705215

Date Reported: 5/5/2017

### Hall Environmental Analysis Laboratory, Inc.

**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 Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: LGT
Chloride	ND	30	mg/Kg	20	5/4/2017 12:04:44 PM	31565
EPA METHOD 8015D MOD: GASOL	INE 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 RA	NGE ORGANICS	<b>;</b>			Analyst	: <b>TOM</b>
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 S	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.

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ė Value above quantitation range
- Analyte detected below quantitation limits Page 6 of 12 J
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1705215

05-May-17

Client:

**Blagg Engineering** 

Project:

Barnes B 3A

Sample ID MB-31565

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 31565

RunNo: 42548

Prep Date: 5/4/2017

Analysis Date: 5/4/2017

SeqNo: 1339022

Units: mg/Kg

Qual

Analyte

Result

**PQL** 1.5

SPK value SPK Ref Val %REC LowLimit

HighLimit %RPD **RPDLimit** 

Chloride

ND

TestCode: EPA Method 300.0: Anions

Sample ID LCS-31565

SampType: Ics Batch ID: 31565

RunNo: 42548

Units: mg/Kg

Client ID: LCSS Prep Date: 5/4/2017

Analysis Date: 5/4/2017

SPK value SPK Ref Val

%REC LowLimit

SeqNo: 1339023

HighLimit

%RPD

**RPDLimit** 

Qual

Analyte

Result

PQL 1.5

15.00

96.1

90

Chloride

14

110

**Qualifiers:** 

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

R RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Е Value above quantitation range

Analyte detected below quantitation limits

P Sample pH Not In Range

RLReporting Detection Limit Sample container temperature is out of limit as specified Page 7 of 12

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1705215

05-May-17

Client:

Blagg Engineering

Project:

Barnes B 3A

Sample ID MB-31564	SampType: M	IBLK	Tes	tCode: E	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batch ID: 3	1564	F	lunNo: 4	2525				
Prep Date: 5/4/2017	Analysis Date:	5/4/2017	S	SeqNo: 1	337677	Units: %Red	C	•	
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: L	cs	Tes	Code: E	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch ID: 3	1564	F	tunNo: 4	2525				
Prep Date: 5/4/2017	Analysis Date: \$	5/4/2017	s	eqNo: 1	337679	Units: %Red	:		
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: L	cs	Tes	Code: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch ID: 3	1563	F	lunNo: 4	2534				
Prep Date: 5/4/2017	Analysis Date:	5/4/2017	S	eqNo: 1	337721	Units: mg/K	g		
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	SampT	ype: ME	BLK	Tes	TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID: PBS	Batch	n ID: <b>31</b>	563	F	RunNo: 4	2534				
Prep Date: 5/4/2017	Analysis D	ate: <b>5/</b>	4/2017	S	SeqNo: 1	337722	Units: mg/K	ζg		
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 1705215-001AM	<b>S</b> SampT	ype: MS	5	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: East Wall (North	n) 8'- Batch	n ID: 31	563	F	RunNo: 4	2534				
Prep Date: 5/4/2017	Analysis D	ate: <b>5/</b>	4/2017	S	SeqNo: 1	338263	Units: mg/k	(g		
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 1705215-001AMS	SD SampT	ype: MS	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: East Wall (North	) 8'- Batch	ID: <b>31</b>	563	F	RunNo: 4	2534				
Prep Date: 5/4/2017	Analysis D	ate: 5/	4/2017	8	SeqNo: 1	338264	Units: mg/K	(g		
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

Page 8 of 12

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1705215

05-May-17

Client:

Blagg Engineering

Project:

Barnes B 3A

Sample ID 1705215-001AMSD

SampType: MSD Batch ID: 31563 TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: East Wall (North) 8'-

RunNo: 42534

Prep Date: 5/4/2017

Analysis Date: 5/4/2017

SeqNo: 1338264

Units: mg/Kg

Analyte

**PQL** SPK value SPK Ref Val

%REC LowLimit HighLimit

%RPD **RPDLimit**  Qual

Result

4.873

99.5

Surr: DNOP

4.8

70

130

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Detection Limit

Sample container temperature is out of limit as specified

Page 9 of 12

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1705215

05-May-17

Client:

**Blagg Engineering** 

Project:

Barnes B 3A

Sample ID rb	Samp	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: PBS	Batcl	h ID: <b>S4</b>	2546	F	RunNo: 4	2546				
Prep Date:	Analysis D	Date: 5/	4/2017	8	SeqNo: 1	338517	Units: mg/K	ίg		
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 Ics	SampT	ype: LC	S	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: LCSS	Batcl	n ID: <b>S4</b>	2546	F	RunNo: 4	2546				
Prep Date:	Analysis D	)ate: 5/	4/2017	S	SeqNo: 1	338518	Units: mg/K	(g		

Prep Date:	Analysis [	Date: 5/	4/2017	5	SeqNo: 1	338518	Units: mg/F	(g		
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 1705215-002am	s SampT	ype: MS	3	Tes	tCode: E	PA Method	8260B: Volat	tiles Short	List	
Client ID: North Wall & N	W 10' Batch	1D: <b>S4</b>	2546	F	RunNo: 4	2546				
Prep Date:	Analysis D	ate: 5/	4/2017	5	SeqNo: 1	338519	Units: mg/K	(g		
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	SampTy	pe: MS	SD	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client iD:	North Wall & NW 10'	Batch	D: <b>\$4</b>	2546	R	RunNo: 4	2546				
Prep Date:	Aı	nalysis Da	te: 5/	4/2017	S	SeqNo: 1	338520	Units: mg/k	(g		
Analyte	i	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

Page 10 of 12

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1705215

05-May-17

Client:

Blagg Engineering

**Project:** 

Barnes B 3A

Sample ID 1705215-002ams	d SampT	ype: MS	SD	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: North Wall & NW	/ 10' Batch	 i ID: <b>S4</b>	2546	F	RunNo: 4	2546				
Prep Date:	Analysis D	ate: 5/	4/2017	8	SeqNo: 1	338520	Units: mg/F	<b>(</b> g		
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.
- 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

Page 11 of 12

### 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** 

5.0

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

**RPDLimit** 

Qual

Gasoline Range Organics (GRO)

Surr: BFB

98.4

130

Sample ID 2.5ug gro Ics

SampType: LCS

510

ND

490

TestCode: EPA Method 8015D Mod: Gasoline Range

%RPD

Client ID: LCSS

Batch ID: **G42546** 

RunNo: 42546

Prep Date:

Analysis Date: 5/4/2017

SeqNo: 1338527

Units: mg/Kg

130

130

Analyte Gasoline Range Organics (GRO) Result SPK value SPK Ref Val POL 27 5.0

%REC LowLimit 106

HighLimit 70 70

70

%RPD **RPDLimit** Qual

Surr: BFB

Sample ID 1705215-001ams

SampType: MS

25.00

500.0

93.42

1868

1868

500.0

102

TestCode: EPA Method 8015D Mod: Gasoline Range

%RPD

%RPD

0

Client ID: Prep Date:

East Wall (North) 8'-

Batch ID: G42546 Analysis Date: 5/4/2017 RunNo: 42546

SeqNo: 1338528

Units: mg/Kg

HighLimit

Analyte Gasoline Range Organics (GRO) Result 110 PQL SPK value SPK Ref Val

%REC

6.577

LowLimit

70

128

130

**RPDLimit** 

Qual

Surr: BFB

Sample ID 1705215-001amsd

Client ID: East Wall (North) 8'-

1900

SampType: MSD

19

104 TestCode: EPA Method 8015D Mod: Gasoline Range

Batch ID: G42546

RunNo: 42546

Prep Date:

Analysis Date: 5/4/2017

1900

SeqNo: 1338529

Units: mg/Kg **HighLimit** 

**RPDLimit** Qual

Analyte Gasoline Range Organics (GRO) Surr: BFB

Result 100 PQL 19 93.42

SPK value SPK Ref Val %REC 6.577

103 63.2 99.2 70

LowLimit

128 7.68 130

20 0

Qualifiers:

S

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

% Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

В Analyte detected in the associated Method Blank

Е Value above quantitation range

Analyte detected below quantitation limits

Page 12 of 12

Sample pH Not In Range

RL Reporting Detection Limit

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

### Sample Log-In Check List

Website: www.hallenvironmental.com **BLAGG** RoptNo: 1 Work Order Number: 1705215 Client Name: Received By: **Ashley Gallegos** 5/4/2017 7:00:00 AM **Ashley Gallegos** 5/4/2017 7:28:23 AM Completed By: Reviewed By: ENM 05/04/17 Chain of Custody Not Present ✔ 1. Custody seals intact on sample bottles? No Yes 2. Is Chain of Custody complete? No Not Present Yes V. 3. How was the sample delivered? Courter Log In NA 4. Was an attempt made to cool the samples? No 5. Were all samples received at a temperature of >0° C to 6.0°C NA 6. Sample(s) in proper container(s)? 7. Sufficient sample volume for indicated test(s)? No : 8. Are samples (except VOA and ONG) properly preserved? No NA 9. Was preservative added to bottles? Yes No ₩ No VOA Vials .♥ 10.VOA vials have zero headspace? Yes СИ 11. Were any sample containers received broken? Yes # of preserved bottles checked for pH: No 12. Does paperwork match bottle labels? Yes (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? 13. Are matrices correctly identified on Chain of Custody? Yes V No . No: 14. Is it clear what analyses were requested? Checked by: 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No Person Notified: Date By Whom: Via: eMail Phor.e In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C | Condition | Seal Intact | Seal No | Seal Date |

l' ne	5/3/17 1d	1						-	1		_	~		5/2/2017 1		□ EDD (Type)	O NELAP	Accreditation	Standard	OA/OC Package	email or Fax#:	Phone #:		Mailing Address:	(C)	Client B	Ch
cassary.	ass.	) LOSU							406	1350	1345	(337	1325	1315	Time	ype)		ion	a.	Kane.	ax#:	(505)		dress	なるな	BP A	ain
Samples sub	Riginquished by	Relinquished by:							-					2017	Matrix		□ Other					320				AMERICA	of-Cu
If necessary, samples submitted to Hall Environmental may be subcontracted to other acceptited lab data in the subcontracted on the analytical report.	med by: /	1 Blogg							NORTH Base @ 17-18	Sound Base @ 18'	SOUTH WALL (EXIT)	MEST WALL ( 50~14)	工工		Sample Request ID				□ Level 4 (Full Validation)			- 1183			ENGWEERING INC	Þ	Chain-of-Custody Record
ontracted to other	Received by	Mut							_				_	400 ×1	Container Type and #	Sample Temp	On Ice:	Sampler: Z-	4	7 72	Project Manager:		Project #:	DAKNES	Project Name:	□ Standard	Turn-Around Time:
Chedited laborations	maja	Deck							_				_	Cool	Preservative Type	perature:  \-		- Burton	38	2 Alex	ger			6	r)	Rush	Time:
s. This serves as notice of this	05/04/17 04/05/07/07/07/07/07/07/07/07/07/07/07/07/07/	5/3/17 1650							-000	85	-89	- 003	-602	-001	HEAL NO. 1705215	Sample Temperature: 1, 1+0.5(0)=1-0	□ No							On	× >	0,3	SAME
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the an	L1-0018M-E:22515	3													8270 (Semi		(AC						4107	Albuquerque, NM 87109	3	LABORATORY	ENVIDONMENTAL
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Air Bubbles (Y or N)



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

OrderNo.: 1705310

May 09, 2017

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

RE: Barnes B 3A

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Only

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1705310

Date Reported: 5/9/2017

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Barnes B 3A

Project: Lab ID: 1705310-001 Client Sample ID: TSP-1

Collection Date: 5/4/2017 2:58:00 PM

Matrix: MEOH (SOIL) Received Date: 5/5/2017 6:45:00 AM

Analyses	Result	PQL Qu	al 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 RAN	GE ORGANICS	3			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 RA	NGE				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.

- 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
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 14 J
- Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified

Lab Order 1705310

Date Reported: 5/9/2017

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: TSP-2

Project: Bar

Barnes B 3A

**Collection Date:** 5/4/2017 3:03:00 PM

Lab ID: 1705310-002

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 10:21:06 AM	31587
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S				Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/5/2017 10:06:13 AM	31585
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/5/2017 10:06:13 AM	31585
Surr: DNOP	109	70-130		%Rec	1	5/5/2017 10:06:13 AM	31585
EPA METHOD 8015D: GASOLINE RAI	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	46	23		mg/Kg	5	5/5/2017 9:30:49 AM	G42578
Surr: BFB	151	54-150	s	%Rec	5	5/5/2017 9:30:49 AM	G42578
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.11		mg/Kg	5	5/5/2017 9:30:49 AM	B42578
Toluene	ND	0.23		mg/Kg	5	5/5/2017 9:30:49 AM	B42578
Ethylbenzene	ND	0.23		mg/Kg	5	5/5/2017 9:30:49 AM	B42578
Xylenes, Total	0.62	0.45		mg/Kg	5	5/5/2017 9:30:49 AM	B42578
Surr: 4-Bromofluorobenzene	110	66.6-132		%Rec	5	5/5/2017 9:30:49 AM	B42578

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

- 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 Page 2 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1705310

Date Reported: 5/9/2017

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Project: Barnes B 3A

Lab ID: 1705310-003

Client Sample ID: TSP-3

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

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	ORGANIC	s				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 RANG	E					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.

- 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 Page 3 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1705310

Date Reported: 5/9/2017

### Hall Environmental Analysis Laboratory, Inc.

**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

Received Date: 5/5/2017 6:45:00 AM Matrix: MEOH (SOIL)

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	ORGANIC	s				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	E					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.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 14 J
- P Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1705310

Date Reported: 5/9/2017

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: TSP-5

Project: B

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 RANGI	E ORGANIC	s				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 RANG	E					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.

- 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 Page 5 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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 RANG	GE 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 RAN	IGE					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.

- \* 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 Page 6 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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 Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: MRA
Chloride	ND	30	mg/Kg	20	5/5/2017 11:23:09 AM	31587
EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	s			Analys	t: 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 RAN	GE				Analys	t: 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.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 7 of 14 J
- Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1705310

Date Reported: 5/9/2017

### Hall Environmental Analysis Laboratory, Inc.

**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:

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

Analyses	Result	PQL (	Qual 1	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 RANG	E ORGANIC	s				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 RANG	SE .					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.

- 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 Page 8 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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	ORGANIC	s				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 RANG	E					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.

- 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 Page 9 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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 Qu	al 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 RANG	SE ORGANIC	S			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 RAN	GE				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.

- 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 limitspage 10 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

### 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: Anlons

Client ID: PBS

5/5/2017

Batch ID: 31587

PQL

RunNo: 42576

Prep Date: 5/5/2017

Analysis Date: 5/5/2017

SeqNo: 1339823

Units: mg/Kg

Analyte Chloride

Result ND

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD **RPDLimit**  Qual

Sample ID LCS-31587 LCSS Client ID:

SampType: LCS Batch ID: 31587 TestCode: EPA Method 300.0: Anlons

RunNo: 42576

Units: mg/Kg

Analyte

Prep Date:

Analysis Date: 5/5/2017

SeqNo: 1339824

%REC LowLimit HighLimit

%RPD **RPDLimit**  Qual

1.5

SPK value SPK Ref Val

98.6

90

110

Chloride

Result 15

15.00

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

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Detection Limit

Sample container temperature is out of limit as specified

Page 11 of 14

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1705310

09-May-17

Client:

**Blagg Engineering** 

Project:

Barnes B 3A

Sample ID LCS-31585	SampT	ype: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batcl	1D: <b>31</b>	585	F	RunNo: 42570						
Prep Date: 5/5/2017	Analysis D	ate: 5	/5/2017	5	339186	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	SampT	ype: MI	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics		
Sample ID MB-31585 Client ID: PBS	•	ype: <b>MI</b> n ID: <b>31</b>			tCode: El RunNo: 4		8015M/D: Di	esel Rang	e Organics		
Client ID: PBS	•	1D: 31		F		2570	8015M/D: Di Units: mg/F	-	e Organics		
Client ID: PBS Prep Date: 5/5/2017	Batch	1D: 31	585 /5/2017	F	RunNo: 4	2570		-	e Organics  RPDLimit	Qual	
Client ID: PBS	Batcl Analysis D	n ID: <b>31</b> Pate: <b>5</b> /	585 /5/2017	F	RunNo: 4: SeqNo: 1:	2570 339187	Units: mg/F	(g	•	Qual	
Client ID: PBS Prep Date: 5/5/2017 Analyte	Batcl Analysis D Result	n ID: <b>31</b> Pate: <b>5</b> /	585 /5/2017	F	RunNo: 4: SeqNo: 1:	2570 339187	Units: mg/F	(g	•	Qual	

Sample i 1/05310-001AMS	s Samp	ype: wi	>	res	(Code: E	PA Metnod	8015M/D: DI	eser Kang	e Organics	
Client ID: TSP-1	Batc	h ID: <b>31</b>	585	F	RunNo: 4	2570				
Prep Date: 5/5/2017	Analysis [	Date: 5	/5/2017	8	SeqNo: 1	339527	Units: mg/F	(g		
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			

Sample ID 1705310-001AM	I <b>SD</b> Samp	Type: MS	SD	Tes	PA Method	d 8015M/D: Diesel Range Organics						
Client ID: TSP-1	Batc	h ID: 31	585	F	RunNo: 4	2570						
Prep Date: 5/5/2017	Analysis [	Date: 5/	/5/2017	8	SeqNo: 1	339528	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

Page 12 of 14

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

### 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

54

Client ID: **PBS**  Batch ID: G42578

RunNo: 42578

Prep Date:

Analysis Date: 5/5/2017

**PQL** 

5.0

SeqNo: 1339480

Units: mg/Kg

SPK value SPK Ref Val %REC

Qual

Analyte

Result ND

940

1000

93.5

LowLimit HighLimit %RPD

Gasoline Range Organics (GRO)

Surr: BFB

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

150

Batch ID: G42578

RunNo: 42578

Client ID: LCSS

Sample ID 2.5UG GRO LCS

Analysis Date: 5/5/2017

SeaNo: 1339481

Units: mg/Kg

125

Analyte Gasoline Range Organics (GRO) Result 22 SPK value SPK Ref Val 25.00

SPK value SPK Ref Val

45.62

45.62

142.0

5682

5682

%REC 88.4

LowLimit HighLimit 76.4

%RPD **RPDLimit** 

**RPDLimit** 

Qual

Prep Date:

**PQL** 5.0 1000 1000

101

54 150

Surr: BFB

Sample ID 1705310-002AMS

TSP-2

Sample ID 1705310-002AMSD

Gasoline Range Organics (GRO)

SampType: MS

TestCode: EPA Method 8015D: Gasoline Range

%RPD

Client ID: Prep Date:

Batch ID: G42578

**PQL** 

28

Analysis Date: 5/5/2017

RunNo: 42578

%REC

102

165

SeqNo: 1339482

LowLimit

61.3

54

Units: mg/Kg

150

150

**HighLimit** 

**RPDLimit** Qual

s

Gasoline Range Organics (GRO) Surr: BFB

Prep Date:

Surr: BFB

Analyte

Analyte

190 9400

Result

Result

200

9400

TestCode: EPA Method 8015D: Gasoline Range

Client ID: TSP-2

SampType: MSD Batch ID: G42578 Analysis Date: 5/5/2017

RunNo: 42578 SeqNo: 1339483

Units: mg/Kg

150

**PQL** SPK value SPK Ref Val 28 142.0

%REC 109

166

HighLimit LowLimit 61.3

54

150

%RPD **RPDLimit** 4.94

0

Qual 20 s 0

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Н Holding times for preparation or analysis exceeded

% Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

B Analyte detected in the associated Method Blank

Value above quantitation range

J Analyte detected below quantitation limits Page 13 of 14

P Sample pH Not In Range

Reporting Detection Limit

Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1705310

09-May-17

Client:

Blagg Engineering

Project:

Barnes B 3A

Sample ID RB	SampType: MBLK			Tes	TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: <b>B42578</b>			F	RunNo: 4	2578					
Prep Date:	Analysis [	5/2017	\$	SeqNo: 1	339487	Units: mg/k	ζg				
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 LO	CS Samp	SampType: LCS TestCode: EPA Method 8021B: Volatiles									
Client ID: LCSS	Batc	h ID: <b>B4</b>	2578	F	RunNo: 4						
Prep Date:	Analysis [	Date: <b>5/</b>	5/2017	5	SeqNo: 1	No: 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	Samp1	ype: <b>M</b> \$	3	Tes	TestCode: EPA Method 8021B: Volatiles								
Client ID: TSP-3	Batch	1D: <b>B4</b>	2578	F	RunNo: 42578								
Prep Date:	Analysis D	)ate: 5/	5/2017	\$	SeqNo: 1	339489	Units: mg/k						
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 1705310-003AM	<b>SD</b> SampT	ype: MS	SD	Tes	TestCode: EPA Method 8021B: Volatiles						
Client ID: TSP-3	Batch ID: <b>B42578</b>			F							
Prep Date:	Analysis D	Analysis Date: 5/5/2017			SeqNo: 1339490			(g			
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		
Kylenes, 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

Page 14 of 14

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 6:45:00 AM 5/5/2017 7:01:36 AM Completed By: **Ashiey Gallegos** 05/05/17 Reviewed By: Chain of Custody 1. Custody seals intact on sample bottles? No Not Present Yes Not Present 2. Is Chain of Custody complete? No Yes ✓ 3. How was the sample delivered? Courier Log In 4. Was an attempt made to cool the samples? No NA Yes V 5. Were all samples received at a temperature of >0° C to 6.0°C NA No Sample(s) in proper container(s)? No 7. Sufficient sample volume for indicated test(s)? No No i 8. Are samples (except VOA and ONG) properly preserved? 9. Was preservative added to bottles? No V Yes 10. VOA vials have zero headspace? Yes No No VOA Vials ▼ 11. Were any sample containers received broken? Nэ Yes # of preserved bottles checked for pH: 12. Does paperwork match bottle labels? Nσ (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 13. Are matrices correctly identified on Chain of Custody? No 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? 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 V Person Notifled: 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 1.2 Yes Good

Client:	Chain-of-Custody Record			Turn-Around Time: SAME DAY  Standard XRush ANALYSIS LABORA																	
				Project Name						A	N	AL	YS	115	S L	A	30	RA	AT(	OR	Y
			EERING INC.	BARNE	_	2Δ	"	_		١	www	.hal	lenv	iron	ment	tal.co	om				
Mailing	Address			1	=> 0 .	)n		490	)1 H	awkii	ns N	E -	Alb	uque	erqu	e. N	M 87	109			
				Project #:				Te	1. 50	5-34	5-39	75	F	ах	505-	345-	410	7			
Phone	#: (505	320.	- 1183									A	naly	sis	Req	uest					
email o	r Fax#:			Project Mana	iger:		_	(ylu	30)					04)							
QA/QC	Package:			J. B	SLAbia		(8021)	13 0	M			S		14.SC	PCB's						
Stan	dard		☐ Level 4 (Full Validation)					(Gg	8			SIMS)		PO	2 P(						
Accredi		- 0"		Sampler: J_ BLA66				MTBE + TPH (Gas only)	0/	=	=	8270		NO	808						9
□ NEL		□ Othe	r	On Ice: Yes DNO(CE) Sample Temperature: 1.3+0.1=1.2				7	88	418	504	r 82	S	103	1 86		(A)				0
□ EDD	(Type)_			Sample Tem	perature: \.3	3+0.1=1.2	WEBE	TBE	B (C	pot	pot	100	eta	CI,N	cide	(A)	)-i-	8			S
Data	<b>T</b> '		Commis Dominat ID	Container	Preservative		+	+	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	CHERIDE			Air Bubbles (Y or N)
Date	Time	Matrix	Sample Request ID	Type and #	Туре	HEAL No.	втех	BTEX +	E I	H	8	H'S	'RA	ions	81 F	60B	70 (	3			Bu
ET.					1705310		B		부	Ш	P	R	An	80	82	82	,	$\perp$	_	Ā	
5/4/17	1458	SOIL	73P-1.	402-1 COC		-001	X		X									X			
	1503		TSP-Z		1	-002	1		1									1			
1	1507		TSP-3			-003												1			
	1511		TSP-4			-004							4								
	1515		TSP-5			-005															
	1520		T3P-6			-006						-									
	1524		T3P-7			-007															
	1530	-	T3P-8			-008															
	1535		T3P-9			-009															
1	1346	1	T3P-10	1		-010	1		1												
				A 9																	
Date:	Time:  925	25 Jeff Blegy		Received by:	i Walle	Date Time 5/4/17 1925 Date   Time	1	marks		BUL VID:	V	HIX	0Ni	EVR 011	M					Mos	SKAL
5/4/17	3037	CAN	elle Walt	SIDS IT  Substituting the contracted to other occupant of the possibility. Any sub-contracted data will be clearly notated on the analytical report.																	
,	recessory,	por ipies suoi	THE OF THE CHARGE THE HEAT DE SUC	9	The state of the s	The state of the	hrasi	somey,	n iy at		STOREGO!	Vene	THE OW	- STEEL	13 11000	ACOM VI		i iaiyuC	a repor	The .	



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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 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						Analys	:: LGT
Chloride	ND	30		mg/Kg	20	5/8/2017 10:38:06 AM	31611
EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	S				Analys	: 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 RANG	E					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.

- 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 Page 1 of 6
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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

**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				<del>.</del>		Analys	t: LGT
Chloride	ND	30		mg/Kg	20	5/8/2017 10:50:31 AM	31611
EPA METHOD 8015M/D: DIESEL RANG	SE ORGANIC	S				Analys	t: 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 RAN	GE					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.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 6 J

- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

### 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

Qual

Analyte

Result

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD

%RPD

**RPDLimit** 

Chloride

Client ID:

ND 1.5

SampType: LCS

Batch ID: 31611

TestCode: EPA Method 300.0: Anions RunNo: 42600

Prep Date: 5/8/2017

Sample ID LCS-31611

LCSS

Analysis Date: 5/8/2017

SeqNo: 1340845

Units: mg/Kg

Analyte

PQL SPK value SPK Ref Val %REC

15.00

92.8

**RPDLimit** 

Qual

Chloride

Result 14

1.5

LowLimit 90

HighLimit 110

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded Н

Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits J

Page 3 of 6

Sample pH Not In Range

Reporting Detection Limit RL

Sample container temperature is out of limit as specified

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1705372

09-May-17

Client:

Blagg Engineering

Project:

**BARNES B 3A** 

Diesel Range Organics (DRO) Surr: DNOP	48 4.9	10	50.00 5.000	0	96.7 97.3	63.8	116 130								
Prep Date: 5/8/2017 Analyte	Analysis D Result	PQL	8/2017 SPK value	SPK Ref Val	SeqNo: 1: %REC	LowLimit	Units: mg/k HighLimit	vg %RPD	RPDLimit	Qual					
Client ID: LCSS		1D: 31		-	lunNo: 4		11-7- #								
Sample ID LCS-31607	•	ype: LC		TestCode: EPA Method 8015M/D: Diesel Range Organics											

Sample ID MB-31607	e ID MB-31607 SampType: MBLK				TestCode: EPA Method 8015M/D: Diesel Range Organics											
Client ID: PBS	Batch	Batch ID: 31607			RunNo: 4											
Prep Date: 5/8/2017	Analysis D	ate: 5/	8/2017	8	SeqNo: 1	340062	Units: mg/K	ζg								
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

NO 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

Page 4 of 6

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

### 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:

Batch ID: G42607

RunNo: 42607

Prep Date:

Analysis Date: 5/8/2017

SeqNo: 1340647

Units: mg/Kg

Analyte

Result PQL ND 5.0 SPK value SPK Ref Val %REC LowLimit HighLimit

%RPD **RPDLimit**  Qual

Gasoline Range Organics (GRO)

Sum: BFB

960

1000

95.7

150 54

Sample ID 2.5UG GRO LCS

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

0

Client ID: LCSS

Batch ID: G42607

SPK value SPK Ref Val

RunNo: 42607

Prep Date:

Analysis Date: 5/8/2017

PQL

SeqNo: 1340648 %REC

Units: mg/Kg

%RPD

LowLimit HighLimit 76.4

**RPDLimit** Qual

Analyte Gasoline Range Organics (GRO) Surr: BFB

22 1000

Result

5.0 25.00 1000 90.0 103

54

125 150

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits

Page 5 of 6

Sample pH Not In Range

Reporting Detection Limit RL

Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1705372

09-May-17

Client:

Blagg Engineering

Project:

**BARNES B 3A** 

Sample ID RB	ample ID RB SampType: MBLK				TestCode: EPA Method 8021B: Volatiles									
Client ID: PBS	Batch ID: <b>B42607</b> Analysis Date: <b>5/8/2017</b>			F	RunNo: 4	2607								
Prep Date:				8	SeqNo: 1	340653	Units: mg/K	(g						
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 LC	S Samp	mpType: LCS TestCode: EPA Method						tiles		
Client ID: LCSS	Batc	h ID: <b>B4</b>	2607	F	2607					
Prep Date:	Analysis [	Date: 5/	8/2017	8	SeqNo: 1	340654	Units: mg/f	<b>(</b> g		
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	į.	111	66.6	132			

#### 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

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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	er: <b>1705372</b>		RcptNo:	1
Received By: Andy Freeman	5/8/2017 11:20:00 AI	M .	aff		
Completed By: Anne Thame	5/8/2017 8:14:25 AM	ſ	and In	_	
Reviewed By:	05/08/17				
Chain of Custody					
1. Custody seals intact on sample bottles	97	Yes 🗌	No 🗆	Not Present 🗹	
2. Is Chain of Custody complete?		Yes 🗹	No 🗆	Not Present	
3. How was the sample delivered?		Courter			
<u>Log In</u>					
4. Was an attempt made to cool the same	rples?	Yes 🗹	No 🗆	NA 🗆	
5. Were all samples received at a tempe	rature 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) p	roperty 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 $\square$	No ☑	# of preserved	
12. Does paperwork match bottle labels?	•	Yes 🗹	No □	bottles checked for pH:	
(Note discrepancies on chain of custoo	**	Yes 🗹	No □	(<2 or Adjusted?	>12 unless noted)
<ol> <li>Are matrices correctly identified on Ch</li> <li>Is it clear what analyses were requeste</li> </ol>	•	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:		<u> </u>			
Client Instructions:					
17. Additional remarks:					
18. Cooler Information	la marila di	•			
Cooler No Temp °C Condition  1 2.9 Good	Seal Intact Seal No Yes	Seal Date	Signed By		
L. 4.8 G000	100				

Client:	Chain-of-Custody Record Client: BP Amarica				Time:	SAME DAY	•			•		ALI NA									
Mailing	BLA/A Address	6 Euglin	early Inc.	□ Standard Project Name BARN					400	34 14	W	ww.ha	allenv	/iron	ment	tal.co	om			JK	<b>Y</b> .
		-		Project #:		<del></del>						s N⊏ -3975		ouquo F <b>ax</b>	-						
Phone	#: (5E	S) 32	o-U83										Anal	_							
email o	r Fax#:			Project Manager:				1)	<u>돌</u>	Q				04)							$\Box$
QA/QC I	Package: dard		☐ Level 4 (Full Validation)	J. BLAGG				<b>TABES</b> (8021)	+ TPH (Gas only)	30 / MF		SIMS		PO4,S(	PCB's						
Accredi	AP	□ Othe	er	Sampler:			N. D. A. S. Complete	1.1.1	+ TPH	RO/D	18.1)		_	O3,NO2	s / 8082		(A)				or N)
	(Type)	<del></del>		Simple		-		胃	JBE	9	<u>8</u>	ë ë _	etals	Ž	gg	<b>€</b>	3	出			ځ
Date	Time	Matrix	Sample Request ID	i —	Preservative Type			BTEX + MOTBE	BTEX + MTBE	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1) PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Bubbles (Y or N)
95/2017	1205	Soil	TSP 11-12-13 0000	40221	Cest		-cul	X		x		-	1	Ì	Ť			X		十	1
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Date:	Time:	Relinguish		Received by:	<u> </u>	Date	Time	Ren	narks		<b>R</b>	RP		<u> </u>			ال ماد	$\perp$	- <del>S</del> H	eve	
5/s/17	1705		1 Blogg	Received by:	Mes	45/17	1705											-			
Date:	$J_{\perp}$ $J_{\perp}$ $J_{\perp}$ $J_{\perp}$				'1 ·	5/6/17	Time // : 20	W	35 E	shew L	eut i -	L	1- <i>0</i> 2	วเช <i>เ</i> 	M- U	C)	ZZ:	, ,			
13/17	110)U	L L	mitted to Hall Environmental may be subo	entracted to other ac	July 1/20 Samples Treated with HzOz subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.																

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