

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


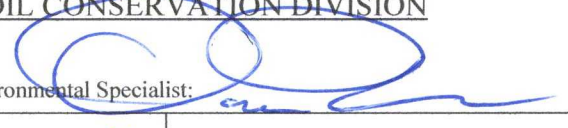
Name of Company: BP	Contact: Steve Moskal	
Address: 380 Airport Road, Suite A, Durango, CO 81303	Telephone No.: 505-330-9179	
Facility Name: Dryden 001E	Facility Type: Natural gas well	
Surface Owner: Federal	Mineral Owner: Federal	API No: <del>3004526655</del>

**LOCATION OF RELEASE**

Unit Letter I	Section 28	Township 28N	Range 08W	Feet from the 1905	North/South Line South	Feet from the 580	East/West Line East	County: San Juan
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Latitude 36.63044° Longitude -107.67960°

**NATURE OF RELEASE**

Type of Release: unknown hydrocarbons	Volume of Release: unknown	Volume Recovered: none
Source of Release: Historical impacts, possible former earthen pit	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: December 26, 2017; 12:50 PM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* During BGT closure activities, impacts were identified beneath the 45 bbl tank. Lab analysis confirmed the impacts are above the BGT closure standards and spill and release guidelines with a site ranking of 20. The site was fully delineated via excavation with impacted soil treated on site via soil shredding.		
Describe Area Affected and Cleanup Action Taken.* The area has been fully delineated via excavation. Attached is documentation of the soil shredding results, excavation results and BP request no further action at this site.		
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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Steve Moskal	Approved by Environmental Specialist: 	
Title: Field Environmental Coordinator	Approval Date: <u>10/12/18</u>	Expiration Date:
E-mail Address: steven.moskal@bp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: August 30, 2018	Phone: 505-330-9179	

\* Attach Additional Sheets If Necessary

NVF1811641153

**NMOCD**

**AUG 31 2018**

**DISTRICT III**

23

**BP America**  
**Dryden 1E**  
**(I) Sec 28 – T28N – R8W**  
**San Juan County, New Mexico**  
**API: 30-045-25566**

Summary Record of Impact Remediation

December 26, 2017 Hydrocarbon impacted soils discovered during closure sampling of a 45 barrel below grade tank (BGT). Samples collected of impacted media immediately under the BGT at 5' below grade. Laboratory test results report 5,000 mg/Kg TPH (GRO = 0.0, DRO = 2,700 mg/Kg, MRO = 2,300 mg/Kg), non-detect for all BTEX constituents and non-detect for chlorides.

NMOCD/BLM site closure standard determined at 100 mg/kg TPH based on:

Distance to nearest water source: > 1,000'

Distance to groundwater: < 100'

Distance to surface water (dry wash): < 1,000' and > 200'

April 27, 2018 Initiate remediation via soil excavation and on-site shredding.

April 30, 2018 Complete excavation of impacted media and of soil shredding. Perform closure sampling on excavation and treated soil pile. Final remedial excavation 12'x12'x10' deep.

Excavation & Treated Pile  
Closure Sample Laboratory Analytical Results  
April 30, 2018

Sample ID	Field OVM (ppm)	TPH (GRO) (mg/Kg)	TPH (DRO) (mg/Kg)	TPH (MRO) (mg/Kg)	TPH Total (mg/Kg)	Total BTEX (mg/Kg)	Benzene (mg/Kg)	Chloride (mg/Kg)
Base 5-Pt @10'	1.2	ND	ND	ND	ND	ND	ND	ND
N & E Walls (6-pt)	0.1	ND	ND	ND	ND	ND	ND	ND
S & W Walls (6-pt)	0.0	ND	ND	ND	ND	ND	ND	ND
Treated Pile TSP-1	0.0	ND	57	62	119	ND	ND	ND

May 2, 2018 Complete excavation backfilling.

August 2, 2018 Conduct treated pile stacking area vadose zone sampling (1 each 5-point composite).

Treated Pile Stacking Area Vadose Zone Laboratory Analytical Results  
August 2, 2018

Sample ID	Field OVM (ppm)	TPH (GRO) (mg/Kg)	TPH (DRO) (mg/Kg)	TPH (MRO) (mg/Kg)	TPH Total (mg/Kg)	Total BTEX (mg/Kg)	Benzene (mg/Kg)	Chloride (mg/Kg)
TSP BG-1 (5-pt)	0.0	ND	54	100	154	ND	ND	ND



Dryden LS 1E

(1) Sec 28 - T28N - R8W  
API: 30-045-25566

Closure Sampling - April 30, 2018

Base 5-pt @ 10': OVM = 1.2 ppm, TPH = ND  
N&E Sidewalls, 6-pt (3'-9'): OVM = 0.1 ppm, TPH = ND  
S&W Sidewalls, 6-pt (3'-9'): OVM = 0.0 ppm, TPH = ND

Treated Soil Pile (100 CY):

5-pt Composite: OVM = 0.0 ppm, TPH = 119 mg/Kg

Treated Pile Vadose Zone Sampling - August 2, 2018

5-pt Composite: OVM = 0.0 ppm, TPH = 154 mg/Kg

45 BGT  
Remedial Excavation  
(12' x 12' x 10' Deep)

Top Perimeter 20' x 20'

Dryden 1E

Google earth

100 ft

N





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

May 02, 2018

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

RE: DRYDEN 1E

OrderNo.: 1805002

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 4 sample(s) on 5/1/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**Lab Order **1805002**Date Reported: **5/2/2018****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** BASE 5 pt @ 10'**Project:** DRYDEN 1E**Collection Date:** 4/30/2018 11:28:00 AM**Lab ID:** 1805002-001**Matrix:** SOIL**Received Date:** 5/1/2018 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/1/2018 12:44:37 PM	37881
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/1/2018 10:48:10 AM	37877
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/1/2018 10:48:10 AM	37877
Surr: DNOP	98.6	70-130		%Rec	1	5/1/2018 10:48:10 AM	37877
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	5/1/2018 10:03:49 AM	37866
Surr: BFB	91.4	15-316		%Rec	1	5/1/2018 10:03:49 AM	37866
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	5/1/2018 10:03:49 AM	37866
Toluene	ND	0.037		mg/Kg	1	5/1/2018 10:03:49 AM	37866
Ethylbenzene	ND	0.037		mg/Kg	1	5/1/2018 10:03:49 AM	37866
Xylenes, Total	ND	0.074		mg/Kg	1	5/1/2018 10:03:49 AM	37866
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	5/1/2018 10:03:49 AM	37866

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 8
	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	
	PQL	Practical Quantitative Limit	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 **1805002**Date Reported: **5/2/2018****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** N & E Walls**Project:** DRYDEN 1E**Collection Date:** 4/30/2018 11:31:00 AM**Lab ID:** 1805002-002**Matrix:** SOIL**Received Date:** 5/1/2018 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/1/2018 12:57:02 PM	37881
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/1/2018 11:10:20 AM	37877
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/1/2018 11:10:20 AM	37877
Surr: DNOP	98.7	70-130		%Rec	1	5/1/2018 11:10:20 AM	37877
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	5/1/2018 10:27:22 AM	37866
Surr: BFB	93.7	15-316		%Rec	1	5/1/2018 10:27:22 AM	37866
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	5/1/2018 10:27:22 AM	37866
Toluene	ND	0.036		mg/Kg	1	5/1/2018 10:27:22 AM	37866
Ethylbenzene	ND	0.036		mg/Kg	1	5/1/2018 10:27:22 AM	37866
Xylenes, Total	ND	0.073		mg/Kg	1	5/1/2018 10:27:22 AM	37866
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	5/1/2018 10:27:22 AM	37866

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	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 **1805002**Date Reported: **5/2/2018****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** S & W Walls**Project:** DRYDEN 1E**Collection Date:** 4/30/2018 11:34:00 AM**Lab ID:** 1805002-003**Matrix:** SOIL**Received Date:** 5/1/2018 8:05:00 AM

<b>Analyses</b>	<b>Result</b>	<b>PQL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/1/2018 1:09:26 PM	37881
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/1/2018 11:32:31 AM	37877
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	5/1/2018 11:32:31 AM	37877
Surr: DNOP	101	70-130		%Rec	1	5/1/2018 11:32:31 AM	37877
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	5/1/2018 10:51:04 AM	37866
Surr: BFB	88.9	15-316		%Rec	1	5/1/2018 10:51:04 AM	37866
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	5/1/2018 10:51:04 AM	37866
Toluene	ND	0.036		mg/Kg	1	5/1/2018 10:51:04 AM	37866
Ethylbenzene	ND	0.036		mg/Kg	1	5/1/2018 10:51:04 AM	37866
Xylenes, Total	ND	0.072		mg/Kg	1	5/1/2018 10:51:04 AM	37866
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	5/1/2018 10:51:04 AM	37866

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 8
	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	
	PQL	Practical Quantitative Limit	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 **1805002**Date Reported: **5/2/2018****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** TSP-1**Project:** DRYDEN 1E**Collection Date:** 4/30/2018 11:37:00 AM**Lab ID:** 1805002-004**Matrix:** SOIL**Received Date:** 5/1/2018 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/1/2018 1:21:50 PM	37881
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	57	9.2		mg/Kg	1	5/1/2018 11:54:29 AM	37877
Motor Oil Range Organics (MRO)	62	46		mg/Kg	1	5/1/2018 11:54:29 AM	37877
Surr: DNOP	103	70-130		%Rec	1	5/1/2018 11:54:29 AM	37877
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	5/1/2018 11:14:42 AM	37866
Surr: BFB	84.8	15-316		%Rec	1	5/1/2018 11:14:42 AM	37866
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	5/1/2018 11:14:42 AM	37866
Toluene	ND	0.038		mg/Kg	1	5/1/2018 11:14:42 AM	37866
Ethylbenzene	ND	0.038		mg/Kg	1	5/1/2018 11:14:42 AM	37866
Xylenes, Total	ND	0.076		mg/Kg	1	5/1/2018 11:14:42 AM	37866
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	5/1/2018 11:14:42 AM	37866

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 8
	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	
	PQL	Practical Quantitative Limit	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#: 1805002

02-May-18

Client: Blagg Engineering

Project: DRYDEN 1E

Sample ID	MB-37881	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	37881	RunNo:	50962					
Prep Date:	5/1/2018	Analysis Date:	5/1/2018	SeqNo:	1655200	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-37881		SampType:	lcs		TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSS		Batch ID:	37881		RunNo:	50962				
Prep Date:	5/1/2018		Analysis Date:	5/1/2018		SeqNo:	1655201		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	14	1.5	15.00	0	95.7	90	110				

## Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	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#: 1805002

02-May-18

Client: Blagg Engineering

Project: DRYDEN 1E

Sample ID	LCS-37877		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	37877		RunNo:	50939				
Prep Date:	5/1/2018		Analysis Date:	5/1/2018		SeqNo:	1654098		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	46	10	50.00	0	92.3	70	130				
Surr: DNOP	4.7		5.000		94.9	70	130				

Sample ID	MB-37877		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	37877		RunNo:	50939				
Prep Date:	5/1/2018		Analysis Date:	5/1/2018		SeqNo:	1654099		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	9.7		10.00		97.4	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  
PQL Practical Quantitative Limit  
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#: 1805002

02-May-18

Client: Blagg Engineering

Project: DRYDEN 1E

Sample ID	MB-37866	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	37866	RunNo:	50952					
Prep Date:	4/30/2018	Analysis Date:	5/1/2018	SeqNo:	1654483	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		92.8	15	316			

Sample ID	LCS-37866	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	37866	RunNo:	50952					
Prep Date:	4/30/2018	Analysis Date:	5/1/2018	SeqNo:	1654484	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	75.9	131			
Surr: BFB	1000		1000		100	15	316			

## 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
PQL Practical Quantitative Limit	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#: 1805002

02-May-18

Client: Blagg Engineering

Project: DRYDEN 1E

Sample ID	MB-37866		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 37866		RunNo: 50952					
Prep Date:	4/30/2018		Analysis Date: 5/1/2018		SeqNo: 1654509		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	1.0		1.000		105	80	120			

Sample ID	LCS-37866		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 37866		RunNo: 50952					
Prep Date:	4/30/2018		Analysis Date: 5/1/2018		SeqNo: 1654510		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	100	77.3	128			
Toluene	1.0	0.050	1.000	0	101	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	101	80.7	127			
Xylenes, Total	3.1	0.10	3.000	0	103	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

### 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
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



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

## Sample Log-In Check List

Client Name: **BLAGG**

Work Order Number: **1805002**

RcptNo: **1**

Received By: **Isaiah Ortiz** 5/1/2018 8:05:00 AM

Completed By: **Anne Thorne** 5/1/2018 8:38:38 AM

Reviewed By: **[Signature]** 5/1/18

*Labeled by AT 05/01/18*

### Chain of Custody

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

### Log In

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

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

### Special Handling (if applicable)

15. 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: \_\_\_\_\_

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good	Yes			







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

August 08, 2018

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

RE: DRYDEN 1E

OrderNo.: 1808166

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/3/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1808166

Date Reported: 8/8/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP BG-1 (5-pt)

Project: DRYDEN 1E

Collection Date: 8/2/2018 11:08:00 AM

Lab ID: 1808166-001

Matrix: SOIL

Received Date: 8/3/2018 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	8/3/2018 10:48:14 AM	39579
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>AG</b>
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/3/2018 1:17:58 PM	39572
Surr: BFB	111	70-130		%Rec	1	8/3/2018 1:17:58 PM	39572
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>lrm</b>
Diesel Range Organics (DRO)	54	9.7		mg/Kg	1	8/3/2018 12:26:13 PM	39576
Motor Oil Range Organics (MRO)	100	49		mg/Kg	1	8/3/2018 12:26:13 PM	39576
Surr: DNOP	98.0	50.6-138		%Rec	1	8/3/2018 12:26:13 PM	39576
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.017		mg/Kg	1	8/3/2018 1:17:58 PM	39572
Toluene	ND	0.034		mg/Kg	1	8/3/2018 1:17:58 PM	39572
Ethylbenzene	ND	0.034		mg/Kg	1	8/3/2018 1:17:58 PM	39572
Xylenes, Total	ND	0.068		mg/Kg	1	8/3/2018 1:17:58 PM	39572
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	1	8/3/2018 1:17:58 PM	39572
Surr: Toluene-d8	95.6	70-130		%Rec	1	8/3/2018 1:17:58 PM	39572

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	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#: 1808166

08-Aug-18

Client: Blagg Engineering

Project: DRYDEN 1E

Sample ID	MB-39579	SampType:	mbk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	39579	RunNo:	53189					
Prep Date:	8/3/2018	Analysis Date:	8/3/2018	SeqNo:	1751417	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-39579	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	39579	RunNo:	53189					
Prep Date:	8/3/2018	Analysis Date:	8/3/2018	SeqNo:	1751418	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.7	90	110			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| PQL Practical Quantitative Limit                        | 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#: 1808166

08-Aug-18

Client: Blagg Engineering

Project: DRYDEN 1E

Sample ID	MB-39576	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	39576	RunNo:	53193					
Prep Date:	8/3/2018	Analysis Date:	8/3/2018	SeqNo:	1750562	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		95.1	50.6	138			

Sample ID	LCS-39576	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	39576	RunNo:	53193					
Prep Date:	8/3/2018	Analysis Date:	8/3/2018	SeqNo:	1750563	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	96.2	70	130			
Surr: DNOP	5.0		5.000		100	50.6	138			

### 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
PQL Practical Quantitative Limit	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#: 1808166

08-Aug-18

Client: Blagg Engineering

Project: DRYDEN 1E

Sample ID	Ics-39572	SampType: LCS4			TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	BatchQC	Batch ID: 39572			RunNo: 53199					
Prep Date:	8/2/2018	Analysis Date: 8/3/2018			SeqNo: 1750609		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.1	80	120			
Toluene	0.94	0.050	1.000	0	93.5	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.0	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	0.56		0.5000		111	70	130			
Surr: Toluene-d8	0.49		0.5000		98.1	70	130			

Sample ID	mb-39572		SampType:	MBLK		TestCode:	EPA Method 8260B: Volatiles Short List				
Client ID:	PBS		Batch ID:	39572		RunNo:	53199				
Prep Date:	8/2/2018		Analysis Date:	8/3/2018		SeqNo:	1750610		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	0.62		0.5000		124	70	130				
Surr: Toluene-d8	0.50		0.5000		100	70	130				

Sample ID	Ics-39589		SampType: LCS4		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	BatchQC		Batch ID: 39589		RunNo: 53243					
Prep Date:	8/3/2018		Analysis Date: 8/6/2018		SeqNo: 1752198		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.56		0.5000		111	70	130			
Surr: Toluene-d8	0.45		0.5000		89.4	70	130			

Sample ID	mb-39589		SampType:	MBLK		TestCode:	EPA Method 8260B: Volatiles Short List				
Client ID:	PBS		Batch ID:	39589		RunNo:	53243				
Prep Date:	8/3/2018		Analysis Date:	8/6/2018		SeqNo:	1752199		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	0.63		0.5000		125	70	130				
Surr: Toluene-d8	0.47		0.5000		94.3	70	130				

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| PQL Practical Quantitative Limit                        | 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#: 1808166

08-Aug-18

Client: Blagg Engineering

Project: DRYDEN 1E

Sample ID	lcs-39572		SampType: LCS		TestCode: EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS		Batch ID: 39572		RunNo: 53199					
Prep Date:	8/2/2018		Analysis Date: 8/3/2018		SeqNo: 1750597		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	70	130			
Surr: BFB	530		500.0		106	70	130			

Sample ID	mb-39572		SampType:	MBLK		TestCode:	EPA Method 8015D Mod: Gasoline Range				
Client ID:	PBS		Batch ID:	39572		RunNo:	53199				
Prep Date:	8/2/2018		Analysis Date:	8/3/2018		SeqNo:	1750598		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	550		500.0		110	70	130				

Sample ID	lcs-39589		SampType: LCS		TestCode: EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS		Batch ID: 39589		RunNo: 53243					
Prep Date:	8/3/2018		Analysis Date: 8/6/2018		SeqNo: 1752062		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	530		500.0		106	70	130			

Sample ID	mb-39589		SampType:	MBLK		TestCode:	EPA Method 8015D Mod: Gasoline Range				
Client ID:	PBS		Batch ID:	39589		RunNo:	53243				
Prep Date:	8/3/2018		Analysis Date:	8/6/2018		SeqNo:	1752063		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: BFB	560		500.0		112	70	130				

### Qualifiers:

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





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

## Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1808166

RcptNo: 1

Received By: Anne Thorne 8/3/2018 7:30:00 AM

Completed By: Anne Thorne 8/3/2018 7:50:22 AM

Reviewed By: JO 08/03/18

Labeled by AT 08/03/18

### Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐

2. How was the sample delivered? Courier

### Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐

4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐

5. Sample(s) in proper container(s)? Yes ☒ No ☐

6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐

7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐

8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐

9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒

10. Were any sample containers received broken? Yes ☐ No ☒

11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐

13. Is it clear what analyses were requested? Yes ☒ No ☐

14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

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

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

15. 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: \_\_\_\_\_

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Client: BP AMERICA

BALLO ENGINEERING

Mailing Address: \_\_\_\_\_

Phone #: 505-320-1183

email or Fax#: \_\_\_\_\_

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other \_\_\_\_\_

☐ EDD (Type) \_\_\_\_\_

☐ Standard ☒ Rush Same Day

DRYDEN 1E

Project #:

Project Manager:

~~IB~~ STEVE MOSKAL

Sampler: JEFF BLAGG

On Ice: ☒ Yes ☐ No

Sample Temperature:  $2.4^{\circ}\text{C} - 1.0 = 1.4$

Container  
Type and #  
MCHKT

Preservative  
Type

HEAL No

1808166

202.

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

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/2/18	1730	Jill Bley	Christy Waite	8/2/18	1730
Date:	Time:	Relinquished by:	Received by:	Date	Time
8/2/18	1810	Christy Waite	[Signature]	8/13/18	0730

Remarks: Bu BP  
CONTACT! STEVE MOSKAL  
VID! VHIXONEVRM  
WBS: L1-001CT-E:DRYDEN\_1E

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.