OIL CONS. DIV DIST. 3

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

State of New Mexico
Energy Minerals and Natural Resources

MAR 15 2016

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: BP	Contact: Steve Moskal
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9497
Facility Name: Mansfield 001M	Facility Type: Natural gas well

Surface Owner: Federal	Mineral Owner: Federal	API No. 3004532651

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County: San Juan
G	19	30N	9W	1,345	North	1,740	East	

Latitude 36.8009 ° **Longitude** -107.81836°

NATURE OF RELEASE

Type of Release: condensate/oil and produced water	Volume of Release: Approx. 45bbl condensate/40 bbl produced water	Volume Recovered: Approx. 20 bbl
Source of Release: Corrosion of production tank sidewall.	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: 2/4/2016
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? A phone call to Cory Smith	
By Whom? Steve Moskal of BP	Date and Hour: 2/4/2016 at 9:40 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A small pin hole was found on the sidewall of the production tank. The release was captured inside the secondary containment berm. Impacted soils were excavated and removed from the site. The tank will be replaced with another tank of like in kind.

Describe Area Affected and Cleanup Action Taken.* The freestanding liquid was removed. Impacted soil was excavated and transported off site for landfarm treatment. Clean fill dirt was imported for use as backfill. The final excavation measure approximately 55' x 40' x 27' deep wit a total of 1,978 cubic yards of soil removed from the site. Final closure samples were collected under the observation of the NMOCD and submitted to a laboratory for analysis. A field report and laboratory reports are attached.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Steve Moskal	Approved by Environmental Specialist:	
Title: Field Environmental Coordinator	Approval Date: 3/23/16	Expiration Date:
E-mail Address: steven.moskal@bp.com	Conditions of Approval:	Attached ☐
Date: March 14, 2016 Phone: 505-326-9497		

* Attach Additional Sheets If Necessary

#NCS1603556147

33

BP America
Mansfield 1M
(G) Sec 19 – T30N – R9W
San Juan County, New Mexico
API: 30-045-32651

Summary Record of Impact Remediation

February 4, 2016 Discovery of the loss of approximately 45 barrels condensate and 40 barrels produced water through a small pin hole in the side of the production tank. All fluids contained within the tank berm. Recovered approximately 20 barrels.

Site NMOCD/BLM closure standard determined at 100 ppm TPH based on:

Horizontal Distance to Dry Wash < 1,000 feet (10 points)
Nearest Water Well > 1,000 feet (0 points)
Depth to Groundwater < 100 feet (10 points)

February 29, 2016 Begin site remediation via excavation with trackhoe. Collect soil samples within impact area and outside impact area for determination of extent of impacts. Excavation plan developed to dig 'engineered design' to include sloped/terraced sidewalls to eliminate risk of caving during remediation.

March 4, 2016 Excavation size approximately 40' x 40' x 27' deep. Sample north, south and east sidewalls and east base for closure. Witnessed by NMOCD.

March 5, 2016 Receive rush lab results. All passed.

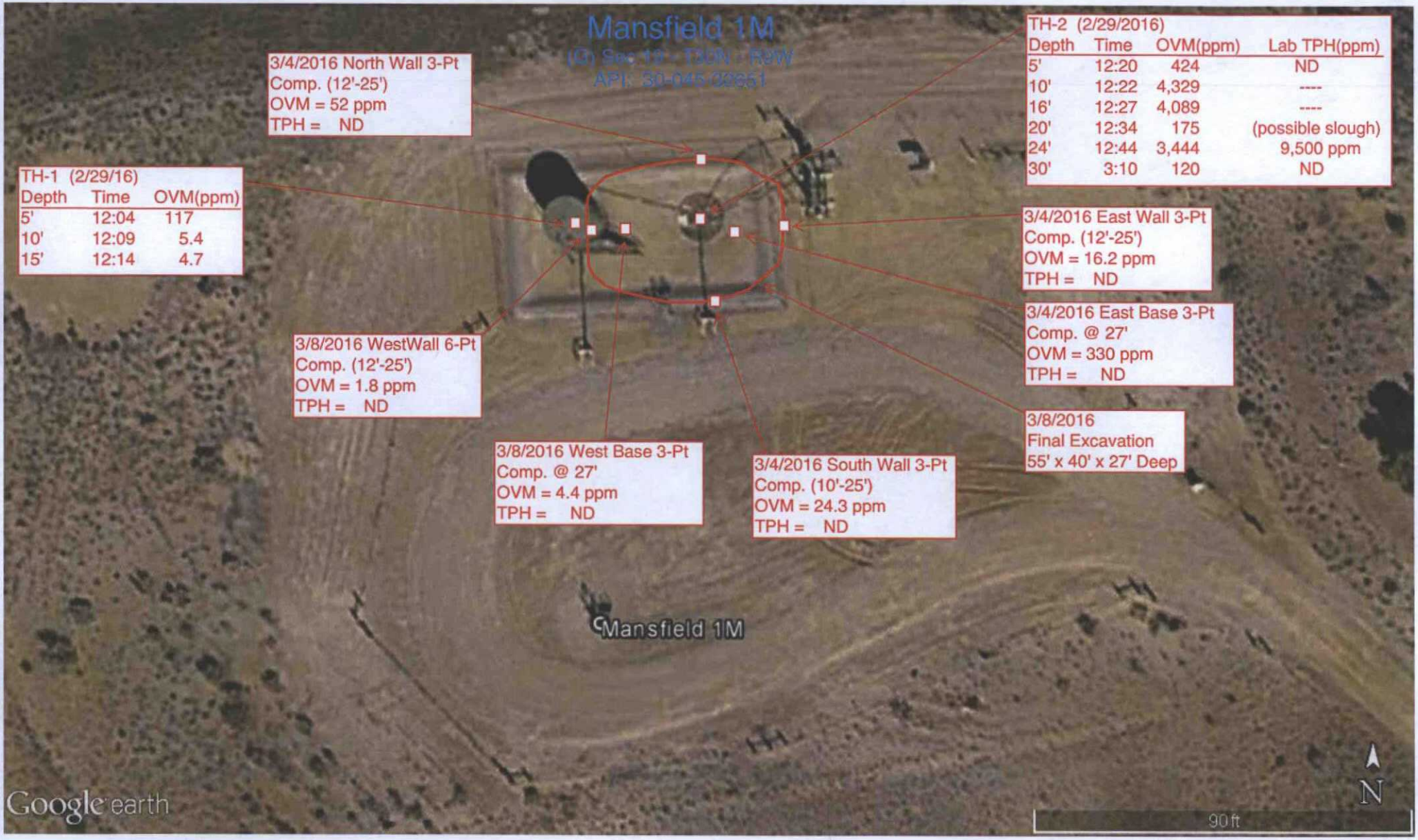
March 8, 2016 Extend excavation towards west, final size approximately 55' x 40' x 27' deep. Sample extended west sidewall and west base for closure. Witnessed by NMOCD.

March 9, 2016 Receive rush lab results. All passed

Sample ID	Date/Time	Field OVM	TPH 8015B (DRO+GRO)	BTEX 8021	Chloride	Comments
TH-2 @ 30' (@BGT location)	2/29/2016 @ 15:10	120 ppm	ND	0.12 mg/Kg	38 mg/Kg	Passed
East Base 3-pt @ 27'	3/4/2016 @ 14:11	330 ppm	ND	0.337 mg/Kg	ND	Passed
North Wall 3-pt (12'-25')	3/4/2016 @ 14:30	52 ppm	ND	ND	37 mg/Kg	Passed
East Wall 3-pt (12'-25')	3/4/2016 @ 15:23	16.3 ppm	ND	ND	ND	Passed
South Wall 3-pt (10'-25')	3/4/2016 @ 14:44	24.3 ppm	ND	ND	ND	Passed
West Base 3-pt @ 27'	3/8/2016 @ 12:29	4.4 ppm	ND	ND	41 mg/Kg	Passed

West Wall Extension 6-pt (12'-25')	3/8/2016 @ 12:35	1.8 ppm	ND	ND	32 mg/Kg	Passed
NMOCD/BLM	Closure Standard:	NA	100 mg/Kg	50 mg/Kg	1,000 mg/Kg	

March 14, 2016 Complete backfilling operations. Total volume transported to JFJ Crouch Mesa Landfarm = 1,978 cubic yards (Form C-138 Attached).


Mansfield 1M
(G) Sec 12 - T30N - R9W
API: 30-045-32651
3/4/2016 North Wall 3-Pt
Comp. (12'-25')
OVM = 52 ppm
TPH = ND
TH-1 (2/29/16)
Depth Time OVM(ppm)
5' 12:04 117
10' 12:09 5.4
15' 12:14 4.7
TH-2 (2/29/2016)
Depth Time OVM(ppm) Lab TPH(ppm)
5' 12:20 424 ND
10' 12:22 4,329 ----
16' 12:27 4,089 ----
20' 12:34 175 (possible slough)
24' 12:44 3,444 9,500 ppm
30' 3:10 120 ND
3/4/2016 East Wall 3-Pt
Comp. (12'-25')
OVM = 16.2 ppm
TPH = ND
3/4/2016 East Base 3-Pt
Comp. @ 27'
OVM = 330 ppm
TPH = ND
3/8/2016 WestWall 6-Pt
Comp. (12'-25')
OVM = 1.8 ppm
TPH = ND
3/8/2016
Final Excavation
55' x 40' x 27' Deep
3/8/2016 West Base 3-Pt
Comp. @ 27'
OVM = 4.4 ppm
TPH = ND
3/4/2016 South Wall 3-Pt
Comp. (10'-25')
OVM = 24.3 ppm
TPH = ND
Mansfield 1M
Google earth
N
90 ft

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 02, 2016

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

RE: Mansfield 1M OrderNo.: 1603003

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/1/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1603003**
Date Reported: **3/2/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: TH-2@30'
Project: Mansfield 1M
Collection Date: 2/29/2016 3:10:00 PM
Lab ID: 1603003-001
Matrix: MEOH (SOIL)
Received Date: 3/1/2016 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	36	30		mg/Kg	20	3/1/2016 11:55:35 AM	24017
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/1/2016 10:50:03 AM	24001
Surr: DNOP	90.5	70-130		%Rec	1	3/1/2016 10:50:03 AM	24001
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	2.9		mg/Kg	1	3/1/2016 10:25:04 AM	23986
Surr: BFB	95.7	66.2-112		%Rec	1	3/1/2016 10:25:04 AM	23986
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.029		mg/Kg	1	3/1/2016 10:25:04 AM	23986
Toluene	0.058	0.029		mg/Kg	1	3/1/2016 10:25:04 AM	23986
Ethylbenzene	ND	0.029		mg/Kg	1	3/1/2016 10:25:04 AM	23986
Xylenes, Total	0.062	0.059		mg/Kg	1	3/1/2016 10:25:04 AM	23986
Surr: 4-Bromofluorobenzene	114	80-120		%Rec	1	3/1/2016 10:25:04 AM	23986

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603003**

02-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID	**MB-24017**	SampType:	**MBLK**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**24017**		RunNo:	**32490**				
Prep Date:	**3/1/2016**	Analysis Date:	**3/1/2016**		SeqNo:	**994361**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-24017**	SampType:	**LCS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**24017**		RunNo:	**32490**				
Prep Date:	**3/1/2016**	Analysis Date:	**3/1/2016**		SeqNo:	**994362**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.5	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603003**

02-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID **LCS-24001**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **24001**	RunNo: **32481**
Prep Date: **3/1/2016**	Analysis Date: **3/1/2016**	SeqNo: **993593** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	65.8	136			
Surr: DNOP	4.5		5.000		90.6	70	130			

Sample ID **MB-24001**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **24001**	RunNo: **32481**
Prep Date: **3/1/2016**	Analysis Date: **3/1/2016**	SeqNo: **993594** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	11		10.00		109	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603003**

02-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID **MB-23986**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **23986**	RunNo: **32486**
Prep Date: **2/29/2016**	Analysis Date: **3/1/2016**	SeqNo: **993887** 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	800		1000		80.2	66.2	112			

Sample ID **LCS-23986**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **23986**	RunNo: **32486**
Prep Date: **2/29/2016**	Analysis Date: **3/1/2016**	SeqNo: **993888** 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	80	120			
Surr: BFB	1000		1000		105	66.2	112			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603003**

02-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID **MB-23986**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **23986**	RunNo: **32486**
Prep Date: **2/29/2016**	Analysis Date: **3/1/2016**	SeqNo: **993921** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.3	80	120			

Sample ID **LCS-23986**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **23986**	RunNo: **32486**
Prep Date: **2/29/2016**	Analysis Date: **3/1/2016**	SeqNo: **993922** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	92.6	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.3		1.000		126	80	120			S

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1603003 | RcptNo: 1

Received by/date: 03/01/16

Logged By: Lindsay Mangin 3/1/2016 7:25:00 AM

Completed By: Lindsay Mangin 3/1/2016 8:42:21 AM

Reviewed By: 03/01/16

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: BP AMERICA	Turn-Around Time: ☐ Standard ☒ Rush ASAP SAME DAY
BLAGG ENGINEERING	Project Name: MANSFIELD 1M
Mailing Address:	Project #:
Phone #: 505-320-1183	Project Manager: J. BLAGG
email or Fax#:	Sampler: J. BLAGG
QA/QC Package: ☒ Standard ☐ Level 4 (Full Validation)	On Ice: ☒ Yes ☐ No
Accreditation: ☐ NELAP ☐ Other	Sample Temperature: 2.1
☐ EDD (Type)	

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles (Y or N)
3/16	1510	SOIL	TH-2 @ 30'	4 oz x 1	COOL	1603003-001	X		X									X				

Date: 3/16	Time: 1545	Relinquished by: Jeff Blagg	Received by: Christine Walker	Date: 3/29/16	Time: 1545
Date: 3/29/16	Time: 1814	Relinquished by: Christine Walker	Received by:	Date: 03/01/16	Time: 0725

Remarks: BILL BP
CONTACT: STEVE MOSCAL
VID: VMOS6HQFEC

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 08, 2016

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

RE: Mansfield 1M OrderNo.: 1603273

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/5/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: East Base 3-pt @27'
Project: Mansfield 1M
Collection Date: 3/4/2016 2:11:00 PM
Lab ID: 1603273-001 **Matrix:** SOIL
Received Date: 3/5/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	3/7/2016 11:36:07 AM	24109
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/7/2016 10:54:20 AM	24099
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/7/2016 10:54:20 AM	24099
Surr: DNOP	79.2	70-130		%Rec	1	3/7/2016 10:54:20 AM	24099
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	3/7/2016 10:44:34 AM	24095
Surr: BFB	119	66.2-112	S	%Rec	1	3/7/2016 10:44:34 AM	24095
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.042		mg/Kg	1	3/7/2016 10:44:34 AM	24095
Toluene	0.057	0.042		mg/Kg	1	3/7/2016 10:44:34 AM	24095
Ethylbenzene	ND	0.042		mg/Kg	1	3/7/2016 10:44:34 AM	24095
Xylenes, Total	0.28	0.085		mg/Kg	1	3/7/2016 10:44:34 AM	24095
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	1	3/7/2016 10:44:34 AM	24095

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Mansfield 1M
Lab ID: 1603273-002 **Matrix:** SOIL

Client Sample ID: North Wall 3-pt(12'-25')
Collection Date: 3/4/2016 2:30:00 PM
Received Date: 3/5/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	37	30		mg/Kg	20	3/7/2016 11:48:31 AM	24109
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/7/2016 11:15:51 AM	24099
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/7/2016 11:15:51 AM	24099
Surr: DNOP	81.2	70-130		%Rec	1	3/7/2016 11:15:51 AM	24099
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/7/2016 11:08:10 AM	24095
Surr: BFB	110	66.2-112		%Rec	1	3/7/2016 11:08:10 AM	24095
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.046		mg/Kg	1	3/7/2016 11:08:10 AM	24095
Toluene	ND	0.046		mg/Kg	1	3/7/2016 11:08:10 AM	24095
Ethylbenzene	ND	0.046		mg/Kg	1	3/7/2016 11:08:10 AM	24095
Xylenes, Total	ND	0.091		mg/Kg	1	3/7/2016 11:08:10 AM	24095
Surr: 4-Bromofluorobenzene	114	80-120		%Rec	1	3/7/2016 11:08:10 AM	24095

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Mansfield 1M
Lab ID: 1603273-003 **Matrix:** SOIL

Client Sample ID: South Wall 3-pt(10'-25')
Collection Date: 3/4/2016 2:44:00 PM
Received Date: 3/5/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	3/7/2016 12:00:55 PM	24109
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/7/2016 11:37:19 AM	24099
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/7/2016 11:37:19 AM	24099
Surr: DNOP	82.2	70-130		%Rec	1	3/7/2016 11:37:19 AM	24099
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	3/7/2016 11:31:46 AM	24095
Surr: BFB	109	66.2-112		%Rec	1	3/7/2016 11:31:46 AM	24095
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.042		mg/Kg	1	3/7/2016 11:31:46 AM	24095
Toluene	ND	0.042		mg/Kg	1	3/7/2016 11:31:46 AM	24095
Ethylbenzene	ND	0.042		mg/Kg	1	3/7/2016 11:31:46 AM	24095
Xylenes, Total	ND	0.085		mg/Kg	1	3/7/2016 11:31:46 AM	24095
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	3/7/2016 11:31:46 AM	24095

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Mansfield 1M
Lab ID: 1603273-004 **Matrix:** SOIL

Client Sample ID: East Wall 3-pt(12'-25')
Collection Date: 3/4/2016 3:23:00 PM
Received Date: 3/5/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	3/7/2016 12:13:20 PM	24109
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/7/2016 11:58:49 AM	24099
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	3/7/2016 11:58:49 AM	24099
Surr: DNOP	83.2	70-130		%Rec	1	3/7/2016 11:58:49 AM	24099
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	3/7/2016 11:55:16 AM	24095
Surr: BFB	108	66.2-112		%Rec	1	3/7/2016 11:55:16 AM	24095
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.043		mg/Kg	1	3/7/2016 11:55:16 AM	24095
Toluene	ND	0.043		mg/Kg	1	3/7/2016 11:55:16 AM	24095
Ethylbenzene	ND	0.043		mg/Kg	1	3/7/2016 11:55:16 AM	24095
Xylenes, Total	ND	0.085		mg/Kg	1	3/7/2016 11:55:16 AM	24095
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	3/7/2016 11:55:16 AM	24095

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603273**

08-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID	**MB-24109**	SampType:	**MBLK**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**24109**		RunNo:	**32638**				
Prep Date:	**3/7/2016**	Analysis Date:	**3/7/2016**		SeqNo:	**998627**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-24109**	SampType:	**LCS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**24109**		RunNo:	**32638**				
Prep Date:	**3/7/2016**	Analysis Date:	**3/7/2016**		SeqNo:	**998628**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.9	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603273**

08-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID **LCS-24099**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **24099**	RunNo: **32605**
Prep Date: **3/7/2016**	Analysis Date: **3/7/2016**	SeqNo: **997481** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	10	50.00	0	73.7	65.8	136			
Surr: DNOP	4.0		5.000		80.8	70	130			

Sample ID **MB-24099**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **24099**	RunNo: **32605**
Prep Date: **3/7/2016**	Analysis Date: **3/7/2016**	SeqNo: **997483** 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	7.9		10.00		78.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603273**

08-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID **MB-24095**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **24095**	RunNo: **32608**
Prep Date: **3/4/2016**	Analysis Date: **3/7/2016**	SeqNo: **998147** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		107	66.2	112			

Sample ID **LCS-24095**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **24095**	RunNo: **32608**
Prep Date: **3/4/2016**	Analysis Date: **3/7/2016**	SeqNo: **998148** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.4	80	120			
Surr: BFB	1200		1000		115	66.2	112			S

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603273**

08-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID **MB-24095**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **24095**	RunNo: **32608**
Prep Date: **3/4/2016**	Analysis Date: **3/7/2016**	SeqNo: **998163** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID **LCS-24095**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **24095**	RunNo: **32608**
Prep Date: **3/4/2016**	Analysis Date: **3/7/2016**	SeqNo: **998164** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.050	1.000	0	94.8	80	120			
Toluene	0.96	0.050	1.000	0	96.4	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.9	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.4	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		117	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: **1603273** RcptNo: 1

Received by/date: JA 03/05/16

Logged By: **Joe Archuleta** **3/5/2016 8:05:00 AM** JEA

Completed By: **Joe Archuleta** **3/5/2016 8:31:45 AM** JEA

Reviewed By: AT 03/07/16

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: BP AMERICA

BLAGG ENGINEERING

Mailing Address:

Phone #: 505-320-1183

Email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush Same Day

Project Name: MANSFIELD 1M

Project #:

Project Manager: J. BLAGG

Sampler: J. BLAGG

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1603273	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles (Y or N)
3/2016	1411	SOIL	EAST BASE 3-PT @27'	4 oz x1	COOL	-001	X		X									X				
"	1430	"	NORTH WALL 3-PT (12'-25')	"	"	-002	X		X									X				
"	1444	"	SOUTH WALL 3-PT (10'-25')	"	"	-003	X		X									X				
"	1523	"	EAST WALL 3-PT (12'-25')	"	"	-004	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/4/2016	1608	Jeff Blagg	Christine Walker	3/4/2016	1608
3/4/16	1758	Christine Walker	Jane Arnett	03/05/16	0805

Remarks: BILL BP
CONTACT: STEVE MOSCAL
VID: VMOS6HQFEC

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 10, 2016

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

RE: Mansfield 1M OrderNo.: 1603444

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/9/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: West Base 3-pt @ 27'
Project: Mansfield 1M
Collection Date: 3/8/2016 12:29:00 PM
Lab ID: 1603444-001
Matrix: MEOH (SOIL)
Received Date: 3/9/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	41	30		mg/Kg	20	3/9/2016 10:41:09 AM	24185
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/9/2016 9:50:07 AM	24154
Surr: DNOP	78.3	70-130		%Rec	1	3/9/2016 9:50:07 AM	24154
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	3/9/2016 10:34:07 AM	24131
Surr: BFB	108	66.2-112		%Rec	1	3/9/2016 10:34:07 AM	24131
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.043		mg/Kg	1	3/9/2016 10:34:07 AM	24131
Toluene	ND	0.043		mg/Kg	1	3/9/2016 10:34:07 AM	24131
Ethylbenzene	ND	0.043		mg/Kg	1	3/9/2016 10:34:07 AM	24131
Xylenes, Total	ND	0.086		mg/Kg	1	3/9/2016 10:34:07 AM	24131
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	3/9/2016 10:34:07 AM	24131

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: West Wall Extension 6-pt (12'-25
Project: Mansfield 1M
Collection Date: 3/8/2016 12:35:00 PM
Lab ID: 1603444-002
Matrix: MEOH (SOIL)
Received Date: 3/9/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	32	30		mg/Kg	20	3/9/2016 10:53:34 AM	24185
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/9/2016 10:11:37 AM	24154
Surr: DNOP	79.3	70-130		%Rec	1	3/9/2016 10:11:37 AM	24154
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	3/9/2016 10:57:41 AM	24131
Surr: BFB	107	66.2-112		%Rec	1	3/9/2016 10:57:41 AM	24131
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.045		mg/Kg	1	3/9/2016 10:57:41 AM	24131
Toluene	ND	0.045		mg/Kg	1	3/9/2016 10:57:41 AM	24131
Ethylbenzene	ND	0.045		mg/Kg	1	3/9/2016 10:57:41 AM	24131
Xylenes, Total	ND	0.090		mg/Kg	1	3/9/2016 10:57:41 AM	24131
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	3/9/2016 10:57:41 AM	24131

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603444**

11-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID	**MB-24185**	SampType: **MBLK**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID: **24185**			RunNo: **32693**					
Prep Date:	**3/9/2016**	Analysis Date: **3/9/2016**			SeqNo: **1000596**		Units: **mg/Kg**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								

Sample ID	**LCS-24185**	SampType: **LCS**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID: **24185**			RunNo: **32693**					
Prep Date:	**3/9/2016**	Analysis Date: **3/9/2016**			SeqNo: **1000597**		Units: **mg/Kg**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	93.0	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603444**

11-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID **MB-24154**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **24154**	RunNo: **32662**
Prep Date: **3/9/2016**	Analysis Date: **3/9/2016**	SeqNo: **999359** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.1		10.00		81.0	70	130			

Sample ID **LCS-24154**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **24154**	RunNo: **32662**
Prep Date: **3/9/2016**	Analysis Date: **3/9/2016**	SeqNo: **999422** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.8	65.8	136			
Surr: DNOP	4.0		5.000		80.1	70	130			

Sample ID **1603444-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **West Base 3-pt @ 2**	Batch ID: **24154**	RunNo: **32662**
Prep Date: **3/9/2016**	Analysis Date: **3/9/2016**	SeqNo: **999680** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.15	0	79.0	31.2	162			
Surr: DNOP	4.0		5.015		79.7	70	130			

Sample ID **1603444-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **West Base 3-pt @ 2**	Batch ID: **24154**	RunNo: **32662**
Prep Date: **3/9/2016**	Analysis Date: **3/9/2016**	SeqNo: **999681** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	9.8	48.92	0	84.2	31.2	162	3.90	31.7	
Surr: DNOP	3.9		4.892		80.4	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603444**

11-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID **MB-24131**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **24131**	RunNo: **32666**
Prep Date: **3/8/2016**	Analysis Date: **3/9/2016**	SeqNo: **1000133** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		105	66.2	112			

Sample ID **LCS-24131**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **24131**	RunNo: **32666**
Prep Date: **3/8/2016**	Analysis Date: **3/9/2016**	SeqNo: **1000134** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.0	80	120			
Surr: BFB	1100		1000		110	66.2	112			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603444**

11-Mar-16

Client: Blagg Engineering
Project: Mansfield 1M

Sample ID **MB-24131**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **24131**	RunNo: **32666**
Prep Date: **3/8/2016**	Analysis Date: **3/9/2016**	SeqNo: **1000154** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID **LCS-24131**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **24131**	RunNo: **32666**
Prep Date: **3/8/2016**	Analysis Date: **3/9/2016**	SeqNo: **1000155** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	83.1	80	120			
Toluene	0.87	0.050	1.000	0	87.2	80	120			
Ethylbenzene	0.92	0.050	1.000	0	91.9	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.5	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1603444 | RcptNo: 1

Received by/date:		03/09/16	
Logged By:	Lindsay Mangin	3/9/2016 7:15:00 AM	
Completed By:	Lindsay Mangin	3/9/2016 7:53:09 AM	
Reviewed By:		03/09/16	

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

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

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

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

Turn-Around Time: ☐ Standard ☒ Rush ASAP SAME DAY
Project Name: MANSFIELD 1M
Project #:
Project Manager: J. BLAGG
Sampler: J. BLAGG
On Ice: ☐ Yes ☐ No
Sample Temperature: 1.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1603144	BTEX + ~~MTBE~~ + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / ~~MRO~~)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles (Y or N)
3/2016	1229	SOIL	WEST BASE 3-pt @ 27'	4 oz x 1	COOL	-001	X		X									X				
"	1235	"	WEST WALL Extension 6-pt (12'-25')	"	"	-002	X		X									X				

Date: 3/8/2016 Time: 1342 Relinquished by: Jeff Blagg Received by: Christen Walters Date: 3/8/2016 Time: 1342
Date: 3/8/16 Time: 1829 Relinquished by: Christen Walters Received by: Date: 03/09/16 Time: 0715

Remarks: BILL BP
CONTACT: STEVE MOSKAL
VID: VMOS6HQFEC

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.

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
220 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-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
BP America Production Co. 200 Energy Ct. Farmington, NM 87401

2. **Originating Site:**
Mansfield 001M
Paykey: VHIXONEVRM

3/9/16 - 300 cy
3/9/16 - 350 cy
3-9-16 - 460 cy
3/3/16 - 460 cy
3/2/16 - 120 cy
3/1/16 - 200 cy

3. **Location of Material (Street Address, City, State or ULSTR):**
QRT/QRT: SW/NE Unit: G Section: 19 T30N R09W

4. **Source and Description of Waste:** Hydrocarbon impacted soil derived from remedial activities.

Estimated Volume 250 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 880 yd³ / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Steve Moskal, representative or authorized agent for BP America Production Company do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description if

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

Steve Moskal, representative for BP America Production Company authorize IEI to complete required testing/sign the Generator Waste Testing Certification.

I, K. Solph, representative for IEI do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
Crossfire

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Industrial Ecosystems Inc., JFJ Waste Management Facility (JFJ), Permit NM-01-0010B

Address of Facility: #49 CR 3150 Aztec, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: K. Solph TITLE: Clerk DATE: 2/29/16

SIGNATURE: K. Solph TELEPHONE NO.: 1632-1782

Surface Waste Management Facility Authorized Agent

2/15