

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

Form C-141
Revised August 8, 2011

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

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

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company: BP America Production Company Operated by Devon Energy	Contact: Steve Moskal
Address: 200 Energy Court Farmington, NM 87401	Telephone No.: 505-326-9497
Facility Name: Northeast Blanco Unit 439 (Sims Gathering Pipeline)	Facility Type: 4" CBM Produced Water Gathering line

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-045-27147
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	13	30N	8W					San Juan

Starting: Latitude: 36.802758/Longitude: -107.631033 Ending: Latitude: 36.803148/Longitude: -107.632068

NATURE OF RELEASE

Type of Release: Produced Water Spill	Volume of Release 84 BBL	Volume Recovered None
Source of Release: Suspected internal corrosion of 4" steel water gathering line	Date and Hour of Occurrence Unknown	Date and Hour of Discovery July 13, 2016; 10:30 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Contacted OCD: Vanessa Fields, BLM Katherina Diemer,	
By Whom? Steve Moskal - Environmental Coordinator - BP	Date and Hour 7/13/2016 Phone 1:35 PM PM	Email- 5:30 PM
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse. 84 BBL	

If a Watercourse was Impacted, Describe Fully.
The release went from the pipeline right of way to an unnamed wash that carried the Produced water approximately 620'.
Drainage impacts: Visible salt and mineral staining on wash banks and on rocks.

OIL CONS. DIV. DIST. 3
SEP 22 2016

Describe Cause of Problem and Remedial Action Taken.*
Suspect internal corrosion of steel water line caused pipeline leak. The pipeline was shut-in and repaired.
Remedial Actions Taken: Laboratory sample results indicated action for elevated chlorides required downstream of the point of release; no TPH detected. Gypsum was applied and raked into the he downstream portion of the release as indicated on the attached map. TPH detected at the source of the release were rather low, but exceeded the site closure requirements.

Describe Area Affected and Cleanup Action Taken.* - See attached map of release.
Clean-up actions taken: The area affected remained to the downgradient wash of the release point, as indicated in blue of the attached figure. Sample results indicated Gypsum was applied to the downgradient wash. The area was excavated for pipeline repairs; however the excavation was backfilled prior to sample collection. Several hand auger points were advanced to delineate the impacts of the release point/excavation area. Hand auger points were advanced to encounter native soils/sandstone on the downgradient side of the pipeline. Sample were collected from the hand auger points and submitted for laboratory analysis based on field screening levels using a calibrated organic vapor monitor. Laboratory results resulted in non-detect suggesting no further action at the release 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: 	OIL CONSERVATION DIVISION	
Printed Name: Steve Moskal	Approved by Environmental Specialist 	
Title: Field Environmental Coordinator	Approval Date: 12/9/2016	Expiration Date:
E-mail Address: steven.moskal@bp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: September 21, 2016	Phone: (505) 326-9497	NVF1634438435

* Attach Additional Sheets If Necessary

BP America
NEBU 439
Off Pad Gathering Line Release
(M) Sec 13 – T30N – R8W
San Juan County, New Mexico

Summary Record of Actions

July 13, 2016 A release of produced water was discovered from a steel water gathering line, caused by a corrosion failure of the piping. The pipeline was immediately isolated and regulatory agencies were notified. Soil samples were collected at the leak source, mid-point and down-gradient terminus of the release, which extended approximately 620 feet down a dry ephemeral drainage. Laboratory testing of the soils were reported as follows:

ID	TPH (GRO) (mg/Kg)	TPH (DRO) (mg/Kg)	TPH (MRO) (mg/Kg)	TPH Total (GRO+DRO+MRO) (mg/Kg)	BTEX (mg/Kg)	Chloride (mg/Kg)
Release Point 3-pt Composite	ND	210	120	330	ND	295
Mid Point 3-pt Composite	ND	110	70	180	ND	62
End Point 3-pt Composite	ND	ND	ND	ND	ND	ND

September 8, 2016 Following the pipeline repair and backfilling, a hand auger was used to collect sub-grade soil samples along the pipeline release point and pipeline break. Laboratory testing reported as follows:

ID	Location	Description	Sample OVM (ppm)	TPH (GRO+DRO+MRO) (mg/Kg)	BTEX (mg/Kg)	Chloride (mg/Kg)
HA-1	36.80282 x 107.63114	At Main Surface Leak Point	3pt(1.5'-3'-4.5')= 15.0	Not Tested	Not Tested	Not Tested
			2pt(6'-6'8")= 53.4	ND	ND	43
HA-2	36.80281 x 107.63110	10' South of HA-1	3pt(1.5'-3'-4.5')= 63.3	Not Tested	Not Tested	Not Tested
			2pt(6'-6'6")= 4.2	ND	ND	32
HA-3	36.80276 x 107.63108	20' South of HA-1	3pt(1.5'-3'-4.5')= 1.1	Not Tested	Not Tested	Not Tested
			2pt(6'-6'6")= 0.5	Not Tested	Not Tested	Not Tested

HA-4	36.80283 x 107.63116	10' North of HA-1	3pt(1.5'-3'-4.5')= 108 ----- 2pt(6'-7')= 53.0	ND ----- ND	ND ----- ND	55 ----- 42
HA-5	36.80285 x 107.63117	20' North of HA-1 At Pipe Hole Point	3pt(1.5'-3'-4.5')= 76.8 ----- 2pt(6'-7')= 52.5	ND ----- ND	ND ----- ND	61 ----- 50
HA-6	36.80287 x 107.63117	30' North of HA-1	3pt(1.5'-3'-4.5')= 17.0 ----- 5.5'=No Recovery	Not Tested ----- Not Tested	Not Tested ----- Not Tested	Not Tested ----- Not Tested
HA-7	36.80283 x 107.63115	5' West of HA-4 (native soils at 3')	3pt(1.5'-3'-4.5')= 81.9 ----- 5.5'= 419	Not Tested ----- ND	Not Tested ----- ND	Not Tested ----- 41
HA-8	36.80286 x 107.63116	10' West of HA-4 (native soils at 0')	3pt(1.5'-3'-4.5')= 3.0 ----- 2pt(6'-7')= 1.3	Not Tested ----- Not Tested	Not Tested ----- Not Tested	Not Tested ----- Not Tested

ND = Not Detected

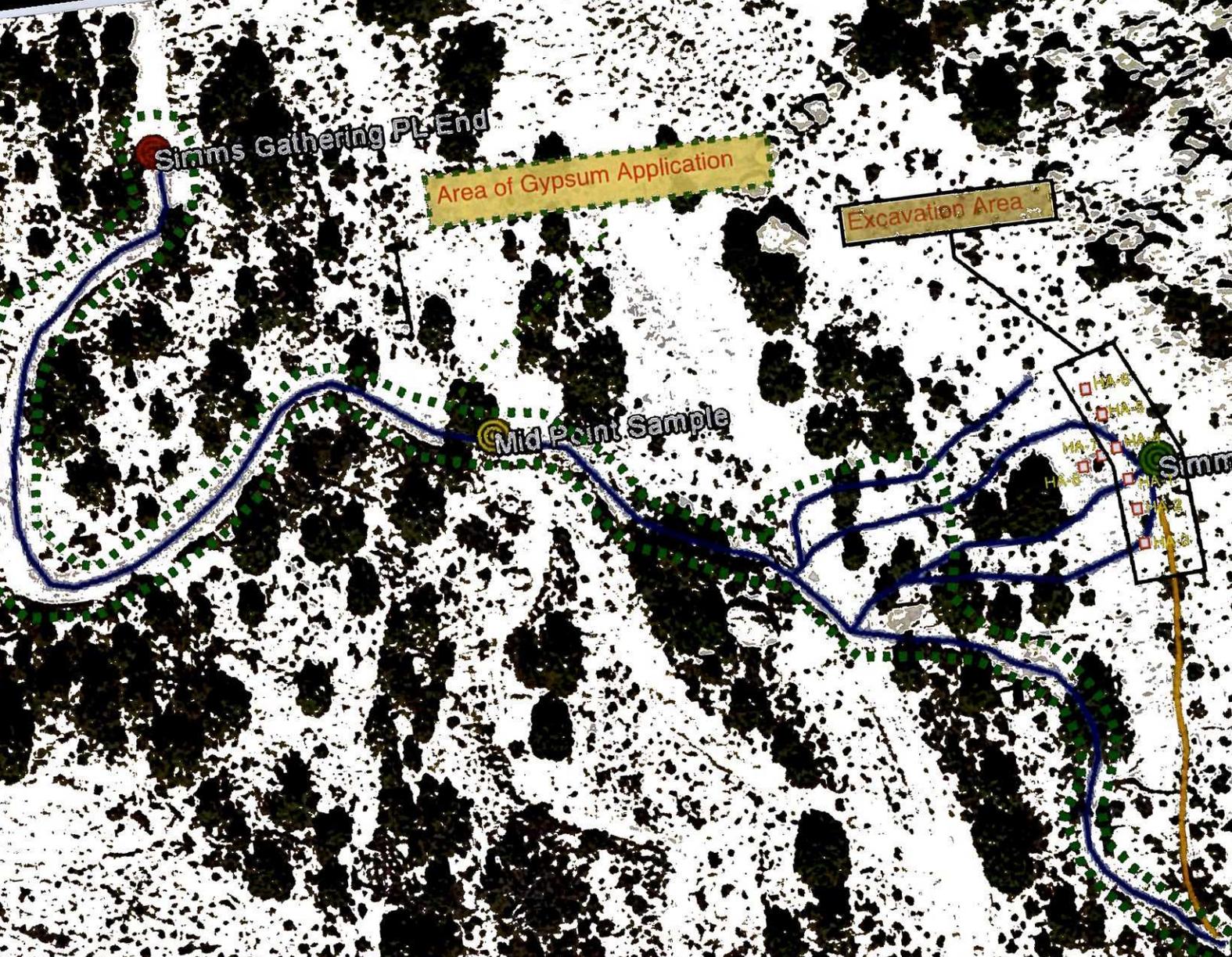
Simms Gathering PL-End

Area of Gypsum Application

Excavation Area

Mid-Point Sample

Simms Gathering PL-s



NEBU 439 Pipeline Release
Approximate Hand Auger Points





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

September 19, 2016

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

RE: NEBU 439 Pipeline Release

OrderNo.: 1609545

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/10/2016 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 qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: HA-1 2pt(6'-6'8")

Project: NEBU 439 Pipeline Release

Collection Date: 9/8/2016 12:13:00 PM

Lab ID: 1609545-001

Matrix: SOIL

Received Date: 9/10/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	43	30		mg/Kg	20	9/16/2016 5:22:35 PM	27545
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/14/2016 10:47:18 AM	27466
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/14/2016 10:47:18 AM	27466
Surr: DNOP	101	70-130		%Rec	1	9/14/2016 10:47:18 AM	27466
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/13/2016 12:03:46 PM	27448
Surr: BFB	95.8	68.3-144		%Rec	1	9/13/2016 12:03:46 PM	27448
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	9/13/2016 12:03:46 PM	27448
Toluene	ND	0.047		mg/Kg	1	9/13/2016 12:03:46 PM	27448
Ethylbenzene	ND	0.047		mg/Kg	1	9/13/2016 12:03:46 PM	27448
Xylenes, Total	ND	0.093		mg/Kg	1	9/13/2016 12:03:46 PM	27448
Surr: 4-Bromofluorobenzene	113	80-120		%Rec	1	9/13/2016 12:03:46 PM	27448

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: HA-2 2pt (6'-6'6")

Project: NEBU 439 Pipeline Release

Collection Date: 9/8/2016 12:37:00 PM

Lab ID: 1609545-002

Matrix: SOIL

Received Date: 9/10/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	32	30		mg/Kg	20	9/16/2016 5:59:49 PM	27545
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/14/2016 11:53:14 AM	27466
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/14/2016 11:53:14 AM	27466
Surr: DNOP	109	70-130		%Rec	1	9/14/2016 11:53:14 AM	27466
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/13/2016 1:14:10 PM	27448
Surr: BFB	92.1	68.3-144		%Rec	1	9/13/2016 1:14:10 PM	27448
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	9/13/2016 1:14:10 PM	27448
Toluene	ND	0.049		mg/Kg	1	9/13/2016 1:14:10 PM	27448
Ethylbenzene	ND	0.049		mg/Kg	1	9/13/2016 1:14:10 PM	27448
Xylenes, Total	ND	0.097		mg/Kg	1	9/13/2016 1:14:10 PM	27448
Surr: 4-Bromofluorobenzene	114	80-120		%Rec	1	9/13/2016 1:14:10 PM	27448

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: HA-4 3pt (1.5'-3'-4.5')

Project: NEBU 439 Pipeline Release

Collection Date: 9/8/2016 1:33:00 PM

Lab ID: 1609545-003

Matrix: SOIL

Received Date: 9/10/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	55	30		mg/Kg	20	9/16/2016 6:12:14 PM	27545
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/14/2016 12:15:06 PM	27466
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/14/2016 12:15:06 PM	27466
Surr: DNOP	102	70-130		%Rec	1	9/14/2016 12:15:06 PM	27466
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/13/2016 2:24:36 PM	27448
Surr: BFB	90.7	68.3-144		%Rec	1	9/13/2016 2:24:36 PM	27448
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	9/13/2016 2:24:36 PM	27448
Toluene	ND	0.048		mg/Kg	1	9/13/2016 2:24:36 PM	27448
Ethylbenzene	ND	0.048		mg/Kg	1	9/13/2016 2:24:36 PM	27448
Xylenes, Total	ND	0.097		mg/Kg	1	9/13/2016 2:24:36 PM	27448
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	9/13/2016 2:24:36 PM	27448

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: HA-4 2pt (6'-7')

Project: NEBU 439 Pipeline Release

Collection Date: 9/8/2016 1:40:00 PM

Lab ID: 1609545-004

Matrix: SOIL

Received Date: 9/10/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	42	30		mg/Kg	20	9/16/2016 6:24:38 PM	27545
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/14/2016 12:37:27 PM	27466
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/14/2016 12:37:27 PM	27466
Surr: DNOP	103	70-130		%Rec	1	9/14/2016 12:37:27 PM	27466
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/13/2016 2:48:10 PM	27448
Surr: BFB	90.0	68.3-144		%Rec	1	9/13/2016 2:48:10 PM	27448
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	9/13/2016 2:48:10 PM	27448
Toluene	ND	0.048		mg/Kg	1	9/13/2016 2:48:10 PM	27448
Ethylbenzene	ND	0.048		mg/Kg	1	9/13/2016 2:48:10 PM	27448
Xylenes, Total	ND	0.096		mg/Kg	1	9/13/2016 2:48:10 PM	27448
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	9/13/2016 2:48:10 PM	27448

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: HA-5 3pt (1.5'-3'-4.5')

Project: NEBU 439 Pipeline Release

Collection Date: 9/8/2016 1:50:00 PM

Lab ID: 1609545-005

Matrix: SOIL

Received Date: 9/10/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	61	30		mg/Kg	20	9/16/2016 6:37:03 PM	27545
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/14/2016 12:59:23 PM	27466
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/14/2016 12:59:23 PM	27466
Surr: DNOP	89.6	70-130		%Rec	1	9/14/2016 12:59:23 PM	27466
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/13/2016 4:45:36 PM	27448
Surr: BFB	90.5	68.3-144		%Rec	1	9/13/2016 4:45:36 PM	27448
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	9/13/2016 4:45:36 PM	27448
Toluene	ND	0.049		mg/Kg	1	9/13/2016 4:45:36 PM	27448
Ethylbenzene	ND	0.049		mg/Kg	1	9/13/2016 4:45:36 PM	27448
Xylenes, Total	ND	0.097		mg/Kg	1	9/13/2016 4:45:36 PM	27448
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	9/13/2016 4:45:36 PM	27448

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:** HA-5 2pt (6'-7')
Project: NEBU 439 Pipeline Release **Collection Date:** 9/8/2016 1:56:00 PM
Lab ID: 1609545-006 **Matrix:** SOIL **Received Date:** 9/10/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	50	30		mg/Kg	20	9/16/2016 6:49:28 PM	27545
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/14/2016 1:21:17 PM	27466
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/14/2016 1:21:17 PM	27466
Surr: DNOP	105	70-130		%Rec	1	9/14/2016 1:21:17 PM	27466
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/13/2016 5:09:03 PM	27448
Surr: BFB	89.7	68.3-144		%Rec	1	9/13/2016 5:09:03 PM	27448
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	9/13/2016 5:09:03 PM	27448
Toluene	ND	0.046		mg/Kg	1	9/13/2016 5:09:03 PM	27448
Ethylbenzene	ND	0.046		mg/Kg	1	9/13/2016 5:09:03 PM	27448
Xylenes, Total	ND	0.091		mg/Kg	1	9/13/2016 5:09:03 PM	27448
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	9/13/2016 5:09:03 PM	27448

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: HA-7 @ 5.5'

Project: NEBU 439 Pipeline Release

Collection Date: 9/8/2016 2:40:00 PM

Lab ID: 1609545-007

Matrix: SOIL

Received Date: 9/10/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	41	30		mg/Kg	20	9/16/2016 7:26:41 PM	27545
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/14/2016 1:43:03 PM	27466
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/14/2016 1:43:03 PM	27466
Surr: DNOP	102	70-130		%Rec	1	9/14/2016 1:43:03 PM	27466
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/13/2016 5:32:28 PM	27448
Surr: BFB	90.4	68.3-144		%Rec	1	9/13/2016 5:32:28 PM	27448
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	9/13/2016 5:32:28 PM	27448
Toluene	ND	0.046		mg/Kg	1	9/13/2016 5:32:28 PM	27448
Ethylbenzene	ND	0.046		mg/Kg	1	9/13/2016 5:32:28 PM	27448
Xylenes, Total	ND	0.093		mg/Kg	1	9/13/2016 5:32:28 PM	27448
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	9/13/2016 5:32:28 PM	27448

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#: 1609545

19-Sep-16

Client: Blagg Engineering
Project: NEBU 439 Pipeline Release

Sample ID	MB-27545	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	27545	RunNo:	37279					
Prep Date:	9/16/2016	Analysis Date:	9/16/2016	SeqNo:	1157481	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	1.5								
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Sample ID	LCS-27545	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	27545	RunNo:	37279					
Prep Date:	9/16/2016	Analysis Date:	9/16/2016	SeqNo:	1157482	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	15	1.5	15.00	0	96.9	90	110			
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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#: 1609545

19-Sep-16

Client: Blagg Engineering
Project: NEBU 439 Pipeline Release

Sample ID	LCS-27466	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	27466	RunNo:	37169					
Prep Date:	9/13/2016	Analysis Date:	9/14/2016	SeqNo:	1153020	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.8	62.6	124			
Surr: DNOP	4.9		5.000		97.5	70	130			

Sample ID	MB-27466	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	27466	RunNo:	37169					
Prep Date:	9/13/2016	Analysis Date:	9/14/2016	SeqNo:	1153021	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		103	70	130			

Sample ID	1609545-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	HA-1 2pt(6'-6'8")	Batch ID:	27466	RunNo:	37169					
Prep Date:	9/13/2016	Analysis Date:	9/14/2016	SeqNo:	1153399	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.9	49.60	2.636	89.9	33.9	141			
Surr: DNOP	4.8		4.960		96.9	70	130			

Sample ID	1609545-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	HA-1 2pt(6'-6'8")	Batch ID:	27466	RunNo:	37169					
Prep Date:	9/13/2016	Analysis Date:	9/14/2016	SeqNo:	1153400	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.7	48.59	2.636	98.2	33.9	141	6.38	20	
Surr: DNOP	5.1		4.859		106	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609545

19-Sep-16

Client: Blagg Engineering
Project: NEBU 439 Pipeline Release

Sample ID	1609545-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	HA-2 2pt (6'-6'6")	Batch ID:	27448	RunNo:	37145					
Prep Date:	9/12/2016	Analysis Date:	9/13/2016	SeqNo:	1152761	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	24.85	0	103	59.3	143			
Surr: BFB	980		994.0		98.1	68.3	144			

Sample ID	1609545-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	HA-2 2pt (6'-6'6")	Batch ID:	27448	RunNo:	37145					
Prep Date:	9/12/2016	Analysis Date:	9/13/2016	SeqNo:	1152762	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.7	23.65	0	109	59.3	143	0.390	20	
Surr: BFB	940		946.1		99.7	68.3	144	0	0	

Sample ID	LCS-27448	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	27448	RunNo:	37145					
Prep Date:	9/12/2016	Analysis Date:	9/13/2016	SeqNo:	1152768	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	80	120			
Surr: BFB	1000		1000		99.8	68.3	144			

Sample ID	MB-27448	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	27448	RunNo:	37145					
Prep Date:	9/12/2016	Analysis Date:	9/13/2016	SeqNo:	1152769	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		90.7	68.3	144			

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#: 1609545

19-Sep-16

Client: Blagg Engineering
Project: NEBU 439 Pipeline Release

Sample ID	1609545-001AMS		SampType: MS	TestCode: EPA Method 8021B: Volatiles						
Client ID:	HA-1 2pt(6'-6'8")		Batch ID: 27448	RunNo: 37145						
Prep Date:	9/12/2016		Analysis Date: 9/13/2016	SeqNo: 1152884	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.024	0.9533	0	99.6	71.5	122			
Toluene	0.96	0.048	0.9533	0.01629	99.4	71.2	123			
Ethylbenzene	0.99	0.048	0.9533	0	104	75.2	130			
Xylenes, Total	2.9	0.095	2.860	0	102	72.4	131			
Surr: 4-Bromofluorobenzene	1.1		0.9533		116	80	120			

Sample ID	1609545-001AMSD		SampType: MSD	TestCode: EPA Method 8021B: Volatiles						
Client ID:	HA-1 2pt(6'-6'8")		Batch ID: 27448	RunNo: 37145						
Prep Date:	9/12/2016		Analysis Date: 9/13/2016	SeqNo: 1152885	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.024	0.9606	0	115	71.5	122	15.0	20	
Toluene	1.1	0.048	0.9606	0.01629	114	71.2	123	13.9	20	
Ethylbenzene	1.1	0.048	0.9606	0	117	75.2	130	12.9	20	
Xylenes, Total	3.4	0.096	2.882	0	117	72.4	131	13.9	20	
Surr: 4-Bromofluorobenzene	1.1		0.9606		116	80	120	0	0	

Sample ID	LCS-27448		SampType: LCS	TestCode: EPA Method 8021B: Volatiles						
Client ID:	LCSS		Batch ID: 27448	RunNo: 37145						
Prep Date:	9/12/2016		Analysis Date: 9/13/2016	SeqNo: 1152892	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	2.0	0.025	2.000	0	101	75.3	123			
Toluene	2.0	0.050	2.000	0	100	80	124			
Ethylbenzene	2.0	0.050	2.000	0	102	82.8	121			
Xylenes, Total	6.1	0.10	6.000	0	102	83.9	122			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	80	120			

Sample ID	MB-27448		SampType: MBLK	TestCode: EPA Method 8021B: Volatiles						
Client ID:	PBS		Batch ID: 27448	RunNo: 37145						
Prep Date:	9/12/2016		Analysis Date: 9/13/2016	SeqNo: 1152893	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		112	80	120			

Qualifiers:

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



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

Sample Log-In Check List

Client Name: **BLAGG**

Work Order Number: **1809545**

RcptNo: **1**

Received by/date: **AG**

oaholic

Logged By: **Lindsay Mangin**

9/10/2016 9:00:00 AM

Jessie Mangin

Completed By: **Lindsay Mangin**

9/12/2016 2:34:08 PM

Jessie Mangin

Reviewed By: *Je* 09/12/16

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: Adjusted? (<2 or >12 unless noted)
- 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 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
 Project Name:
NEBU 439 PIPELINE RELEASE
 Project #:
 Project Manager:
J. Blagg
 Sampler: J. Blagg
 On Ice: Yes No
 Sample Temperature: _____



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + THBS (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)
3/9/2016	1213	SOIL	HA-1 2pt(6'-6'3")	4oz x 1	COOL	1609545 -001	X	X										X	
"	1237	"	HA-2 2pt(6'-6'6")	"	"	-002	X	X										X	
"	1333	"	HA-4 3pt(1.5'-3'-4.5')	"	"	-003	X	X										X	
"	1340	"	HA-4 2pt(6'-7')	"	"	-004	X	X										X	
"	1350	"	HA-5 3pt(1.5'-3'-4.5')	"	"	-005	X	X										X	
"	1356	"	HA-5 2pt(6'-7')	"	"	-006	X	X										X	
"	1440	"	HA-7 @ 5.5'	"	"	-007	X	X										X	

Date: 3/9/2016 Time: 1710 Relinquished by: Jeff Blagg
 Date: 9/9/16 Time: 1941 Relinquished by: Christine Wallace

Received by: Christine Wallace Date: 9/9/16 Time: 1716
 Received by: [Signature] Date: 09/08/16 Time: 0900

Remarks: BILL BP
CONTACT: STEVE MOSKAL
VID: VM056HQFEC

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, Inc.

CLIENT: BP America

Client Sample ID: Release Point 3PC

Project: NEBU 439

Collection Date: 7/13/2016 2:05:00 PM

Lab ID: 1607626-001

Matrix: MEOH (SOIL)

Received Date: 7/14/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	7/14/2016 2:28:08 PM	R35703
Surr: BFB	92.3	70-130		%Rec	1	7/14/2016 2:28:08 PM	R35703
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	210	9.8		mg/Kg	1	7/14/2016 2:54:30 PM	26389
Motor Oil Range Organics (MRO)	120	49		mg/Kg	1	7/14/2016 2:54:30 PM	26389
Surr: DNOP	86.7	70-130		%Rec	1	7/14/2016 2:54:30 PM	26389
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.019		mg/Kg	1	7/14/2016 2:28:08 PM	R35703
Toluene	ND	0.039		mg/Kg	1	7/14/2016 2:28:08 PM	R35703
Ethylbenzene	ND	0.039		mg/Kg	1	7/14/2016 2:28:08 PM	R35703
Xylenes, Total	ND	0.077		mg/Kg	1	7/14/2016 2:28:08 PM	R35703
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	7/14/2016 2:28:08 PM	R35703
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	7/14/2016 2:28:08 PM	R35703
Surr: Dibromofluoromethane	104	70-130		%Rec	1	7/14/2016 2:28:08 PM	R35703
Surr: Toluene-d8	96.3	70-130		%Rec	1	7/14/2016 2:28:08 PM	R35703

Chloride = 295 mg/kg

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 time for preparation of analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 0
ND Not detected at the Reporting Limit	P Sample 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: BP America

Client Sample ID: Mid Point 3PC

Project: NEBU 439

Collection Date: 7/13/2016 2:09:00 PM

Lab ID: 1607626-002

Matrix: MEOH (SOIL)

Received Date: 7/14/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	7/14/2016 2:56:51 PM	R35703
Surr: BFB	91.3	70-130		%Rec	1	7/14/2016 2:56:51 PM	R35703
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	110	10		mg/Kg	1	7/14/2016 11:37:56 AM	26389
Motor Oil Range Organics (MRO)	73	51		mg/Kg	1	7/14/2016 11:37:56 AM	26389
Surr: DNOP	102	70-130		%Rec	1	7/14/2016 11:37:56 AM	26389
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.022		mg/Kg	1	7/14/2016 2:56:51 PM	R35703
Toluene	ND	0.044		mg/Kg	1	7/14/2016 2:56:51 PM	R35703
Ethylbenzene	ND	0.044		mg/Kg	1	7/14/2016 2:56:51 PM	R35703
Xylenes, Total	ND	0.088		mg/Kg	1	7/14/2016 2:56:51 PM	R35703
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	7/14/2016 2:56:51 PM	R35703
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	7/14/2016 2:56:51 PM	R35703
Surr: Dibromofluoromethane	105	70-130		%Rec	1	7/14/2016 2:56:51 PM	R35703
Surr: Toluene-d8	96.2	70-130		%Rec	1	7/14/2016 2:56:51 PM	R35703

Chloride = 62 mg/kg

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 time for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 2 of 0
ND Not detected at the Reporting Limit	P Sample 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	

PRELIMINARY

Analytical Report

Lab Order 1607626

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BP America

Client Sample ID: End Point 3PC

Project: NEBU 439

Collection Date: 7/13/2016 2:13:00 PM

Lab ID: 1607626-003

Matrix: MEOH (SOIL)

Received Date: 7/14/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							
Analyst: DJF							
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	7/14/2016 3:25:31 PM	R35703
Surr: BFB	92.4	70-130		%Rec	1	7/14/2016 3:25:31 PM	R35703
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Analyst: TOM							
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/14/2016 11:59:58 AM	26389
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/14/2016 11:59:58 AM	26389
Surr: DNOP	104	70-130		%Rec	1	7/14/2016 11:59:58 AM	26389
EPA METHOD 8260B: VOLATILES SHORT LIST							
Analyst: DJF							
Benzene	ND	0.019		mg/Kg	1	7/14/2016 3:25:31 PM	R35703
Toluene	ND	0.038		mg/Kg	1	7/14/2016 3:25:31 PM	R35703
Ethylbenzene	ND	0.038		mg/Kg	1	7/14/2016 3:25:31 PM	R35703
Xylenes, Total	ND	0.077		mg/Kg	1	7/14/2016 3:25:31 PM	R35703
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	7/14/2016 3:25:31 PM	R35703
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	7/14/2016 3:25:31 PM	R35703
Surr: Dibromofluoromethane	105	70-130		%Rec	1	7/14/2016 3:25:31 PM	R35703
Surr: Toluene-d8	97.7	70-130		%Rec	1	7/14/2016 3:25:31 PM	R35703

Chloride = less than 30 mg/kg

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 time for preservation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not detected at the Reporting Limit	P	Sample p.p.m. 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

PRELIMINARY