

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company: BP	Contact: Steve Moskal	
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9497	
Facility Name: Northeast Blanco Unit 411	Facility Type: Natural gas well	
Surface Owner: Federal	Mineral Owner: Federal	API No. 3003924365

LOCATION OF RELEASE

Unit Letter G	Section 10	Township 30N	Range 07W	Feet from the 1,465	North/South Line North	Feet from the 1,650	East/West Line East	County: Rio Arriba
------------------	---------------	-----------------	--------------	------------------------	---------------------------	------------------------	------------------------	--------------------

Latitude 36.83052158° Longitude -107.5533976°

NATURE OF RELEASE

Type of Release: Produced water/oil	Volume of Release: Reported 4.68; unknown	Volume Recovered: none
Source of Release: Water transfer pipeline	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: August 1, 2016 @ 11:45 AM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	OIL CONS. DIV DIST. 3 SEP 19 2016
By Whom?	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

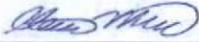
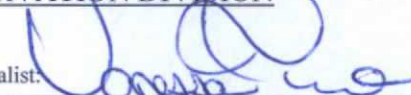
If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Pipeline inspector discovered produced water that had surface within the right of way from underground piping. Fluids ran along the right away, remaining on right of way. Pipeline was shut in pending repairs and remedial investigation.

Describe Area Affected and Cleanup Action Taken.* Approximately 64' by 2-3' wide of visible water and oil flow across the pipeline right of surface. The pipeline was excavated on August 23, 2016 to reveal a release point in the 6" steel pipeline; internal corrosion caused the release. The pipeline was repaired. Soil samples were collected at the surface during the initial response, at depth during the spill remediation and below the pipeline during excavation to repair the pipeline. Laboratory sample results for BTEX, TPH and chloride determine that the initial remediation of the spill suffices to meet the spill and release guidelines based on site ranking. Laboratory results and a field report are included. No further action is required.

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.

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist: 	
Printed Name: Steve Moskal	Approval Date: <u>9/20/2016</u>	Expiration Date:
Title: Field Environmental Coordinator	Conditions of Approval: <u>NVF 1626434753</u>	Attached <input type="checkbox"/>
E-mail Address: steven.moskal@bp.com		
Date: September 15, 2016	Phone: 505-326-9497	

* Attach Additional Sheets If Necessary

BP America

Sims Mesa 6" Pipeline Release

(C) Sec 14 – T30N – R7W

Rio Arriba County, New Mexico

Summary Record of Impact Remediation

August 25, 2016 – The initial response was to delineate and determine the relative degree of hydrocarbon impacts from the point of release (**POR**) of a water pipeline located in Unit letter C, Section 14, T30N, R7W - GPS coordinates: 36.818987, -107.543963. Collected lateral, vertical measurements, and two (2) soil samples from the apparent impacted pathway (*see Table Summary below*). Soil lithology consisted of silt to silty sand. Soil discoloration at ground surface evident by darker shade of brown.

The site closure standard was determined at 5,000 parts per million for Total Petroleum Hydrocarbons based on:

1. **Depth to Groundwater >100 feet (0 points)**
Based on site ground level elevation (6,295 ft.) relative to Navajo Reservoir nearest point and at its maximum capacity (estimated at 6,085 ft.).
2. **Wellhead Protection Area > 1,000 feet (0 points)**
Water well search of State Engineer's database & topo map review for other water sources – attached & Figure 1.
3. **Distance to Nearest Surface Water Body > 1,000 feet (0 points)**
Horizontal distance to blue line on USGS Topo & Aerial Map terrain features – Figures 1 & 2.

September 8, 2016 – Three subsequent soil samples collected after trench advanced to locate and repair pipeline. First sample collected from bedrock sandstone approximately 6 ½ feet below grade (b.g.) at the point of release. Second sample collected from terminal end of release (**TOR**), and last sample collected one (1) foot beneath impacted pathway (*see Table Summary on following page*).

September 12, 2016 – Three additional subsequent soil samples collected within trench area at and near the point of release (*east, west sidewalls, & trench bottom - see Table Summary on following page*). Crew excavated stained pathway to approximately one (1) foot b.g. of material previously described (*see also Figure 3 aerial map*). Total volume of impacted soil removed from pathway and point of release area was approximately 35 to 40 cubic yards.

Table Summary of Field / Lab Data

Sample ID	Date	Time	Field OVM (ppm)	TPH Method 8015B (GRO) (mg/Kg)	TPH Method 8015B (DRO) (mg/Kg)	TPH Method 8015B (MRO) (mg/Kg)	Benzene (mg/Kg)	Total BTEX (mg/Kg)	Chloride (mg/Kg)
5PC @ G.S. (Impact Path)	8/25/2016	1300	NA	68	9,000	36,000	<0.032	<0.13	<30
5PC @ 0.3'-0.5' (Beneath Impact Path)	8/25/2016	1315	NA	58	1,600	3,500	<0.028	<0.11	<30
Closure Standards			100	GRO+DRO+MRO = 5,000			10	50	NA

Notes: OVM = Organic Vapor Meter; ppm = parts per million; mg/Kg = milligram per kilogram; GRO = Gasoline Range Organics; DRO = Diesel Range Organics; MRO = Motor Oil Range Organics; BTEX = benzene, toluene, ethylbenzene, total xylenes; Closure Standards based on NMOCD Spill & Release Guidelines.

Table Summary of Field / Lab Data (continued)

Sample ID	Date	Time	Field OVM (ppm)	TPH Method 8015B (GRO) (mg/Kg)	TPH Method 8015B (DRO) (mg/Kg)	TPH Method 8015B (MRO) (mg/Kg)	Benzene (mg/Kg)	Total BTEX (mg/Kg)	Chloride (mg/Kg)
1 @ 6.5' (POR)	9/08/2016	1120	171	560	8,800	23,000	0.21	43.41	44
2 @ 1' (TOR)	9/08/2016	1130	0.3	<4.2	<10	<50	<0.021	<0.084	<30
3PC @ 1' (Beneath Impact Path)	9/08/2016	1145	8.5	<4.2	<9.8	<49	<0.021	<0.084	<30
3PC-SW (East) @ 2'-4'-6'	9/12/2016	1200	111.2	21	560	1,900	<0.028	<0.11	<30
3PC-SW (West) @ 2'-4'-6'	9/12/2016	1205	3.0	<4.1	22	95	<0.020	<0.081	260
3PC-Trench @ 6'	9/12/2016	1210	5.6	<4.2	260	1,300	<0.021	<0.084	170
Closure Standards			100	GRO+DRO+MRO = 5,000			10	50	NA

Notes: OVM = Organic Vapor Meter; ppm = parts per million; mg/Kg = milligram per kilogram; GRO = Gasoline Range Organics; DRO = Diesel Range Organics; MRO = Motor Oil Range Organics; BTEX = benzene, toluene, ethylbenzene, total xylenes; Closure Standards based on NMOCD Spill & Release Guidelines.

FIGURE 1



BP - Sims Mesa 6" Pipeline Release

(C) Section 14, Township 30.0N, Range 7W, P.M. NM 23

Proximity to Watercourses

FIGURE 2

BP - Sims Mesa 6" Pipeline Release

Point of Release (POR) GPS coordinates:
36.818987, -107.543963

Terminal end of Release (TOR) GPS coordinates:
36.819116, -107.544120

Initial sampling - 08/25/2016
Subsequent - 09/08/2016 &
09/12/2016

1,000 FT. RADIUS
FROM POR

TOR

POR

490

Google earth

© 2016 Google Imagery date: 3/16/2016

N

1000 ft

FIGURE 3

BP - Sims Mesa 6" Pipeline Release

Point of Release (POR) GPS coordinates:
36.818987, -107.543963

Terminal end of Release (TOR) GPS coordinates:
36.819116, -107.544120

Terminal End of Release (TOR)

Sample ID: 2 @ 1' - *grab*
Date: 09/08/16; Time: 1130
OVM = 0.3 ppm
Silt to silty sand, non cohesive,
firm, slightly moist

Approx. 63.5
lateral feet

Impact path tranversing in NW direction

Path width estimated at 2-3 ft.

Darker brown ground surface staining

Sample ID: 3PC @ 1' - 3 pt. *composite near TOR*

Date: 09/08/16; Time: 1145

OVM = 8.5 ppm

Silt to silty sand, non cohesive, firm, slightly moist

Point of Release (POR)

Sample ID: 1 @ 6.5' - *grab*

Date: 09/08/16; Time: 1120

OVM = 171 ppm

Bedrock sandstone, very hard, competent

Pipeline - 5 ft. below grade

Trench for pipeline repair
bottom depth at 6 ft. below grade

OVM calibration

Date: 9/8/16, Time: 1155; Reading: 52.6 ppm
RF - 0.52, Calibration gas - 100 ppm

Google earth

© 2016 Google Imagery date: 3/16/2016

60 ft





New Mexico Office of the State Engineer

Wells with Well Log Information

No wells found.

UTMNAD83 Radius Search (in meters):

Easting (X): 273091.47

Northing (Y): 4077812.24

Radius: 304.8

GPS coordinates: Latitude: 36 deg., 49 min., 8.35 sec. North x Longitude: 107 deg., 32 min., 38.27 sec. West

Sims Mesa 6" Pipeline Release - Aug./Sept. 2016



Sims Mesa 6" Pipeline Release - Aug./Sept. 2016



Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1608F99

Date Reported: 9/1/2016

CLIENT: Blagg Engineering

Client Sample ID: 5PC @ G.S. (Impact path)

Project: Sims Mesa 6" Pipeline Release

Collection Date: 8/25/2016 1:00:00 PM

Lab ID: 1608F99-001

Matrix: MEOH (SOIL)

Received Date: 8/27/2016 11:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	8/30/2016 12:16:37 AM	27234
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	9000	990		mg/Kg	100	8/30/2016 10:53:47 AM	27220
Motor Oil Range Organics (MRO)	36000	5000		mg/Kg	100	8/30/2016 10:53:47 AM	27220
Surr: DNOP	0	70-130	S	%Rec	100	8/30/2016 10:53:47 AM	27220
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	68	6.5		mg/Kg	1	8/29/2016 11:57:20 AM	27186
Surr: BFB	388	68.3-144	S	%Rec	1	8/29/2016 11:57:20 AM	27186
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.032		mg/Kg	1	8/29/2016 11:57:20 AM	27186
Toluene	ND	0.065		mg/Kg	1	8/29/2016 11:57:20 AM	27186
Ethylbenzene	ND	0.065		mg/Kg	1	8/29/2016 11:57:20 AM	27186
Xylenes, Total	ND	0.13		mg/Kg	1	8/29/2016 11:57:20 AM	27186
Surr: 4-Bromofluorobenzene	119	80-120		%Rec	1	8/29/2016 11:57:20 AM	27186

Total TPH = 45,068 mg/Kg**EXCAVATED**

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

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

Analytical Report

Lab Order 1608F99

Date Reported: 9/1/2016

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Blagg Engineering**Client Sample ID:** 5PC @ 0.3'-0.5' (beneath impact)**Project:** Sims Mesa 6" Pipeline Release**Collection Date:** 8/25/2016 1:15:00 PM**Lab ID:** 1608F99-002**Matrix:** MEOH (SOIL)**Received Date:** 8/27/2016 11:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	8/30/2016 12:29:01 AM	27234
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	1600	100		mg/Kg	10	8/31/2016 12:08:37 PM	27220
Motor Oil Range Organics (MRO)	3500	500		mg/Kg	10	8/31/2016 12:08:37 PM	27220
Surr: DNOP	0	70-130	S	%Rec	10	8/31/2016 12:08:37 PM	27220
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	58	5.6		mg/Kg	1	8/29/2016 12:20:45 PM	G36828
Surr: BFB	380	68.3-144	S	%Rec	1	8/29/2016 12:20:45 PM	G36828
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.028		mg/Kg	1	8/29/2016 12:20:45 PM	27186
Toluene	ND	0.056		mg/Kg	1	8/29/2016 12:20:45 PM	27186
Ethylbenzene	ND	0.056		mg/Kg	1	8/29/2016 12:20:45 PM	27186
Xylenes, Total	ND	0.11		mg/Kg	1	8/29/2016 12:20:45 PM	27186
Surr: 4-Bromofluorobenzene	120	80-120	S	%Rec	1	8/29/2016 12:20:45 PM	27186

Total TPH = 5,158 mg/Kg**EXCAVATED**

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

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

Analytical Report

Lab Order 1609432

Date Reported: 9/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: 1 @ 6.5' (POR)

Project: SIMS MESA 6" PIPELINE RELEASE

Collection Date: 9/8/2016 11:20:00 AM

Lab ID: 1609432-001

Matrix: MEOH (SOIL)

Received Date: 9/9/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	44	30		mg/Kg	20	9/9/2016 10:19:40 AM	27414
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	8800	980		mg/Kg	100	9/9/2016 12:46:46 PM	27417
Motor Oil Range Organics (MRO)	23000	4900		mg/Kg	100	9/9/2016 12:46:46 PM	27417
Surr: DNOP	0	70-130	S	%Rec	100	9/9/2016 12:46:46 PM	27417
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	560	24		mg/Kg	5	9/9/2016 10:22:28 AM	R37093
Surr: BFB	463	68.3-144	S	%Rec	5	9/9/2016 10:22:28 AM	R37093
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	0.21	0.12		mg/Kg	5	9/9/2016 10:22:28 AM	B37093
Toluene	6.7	0.24		mg/Kg	5	9/9/2016 10:22:28 AM	B37093
Ethylbenzene	2.5	0.24		mg/Kg	5	9/9/2016 10:22:28 AM	B37093
Xylenes, Total	34	0.49		mg/Kg	5	9/9/2016 10:22:28 AM	B37093
Surr: 4-Bromofluorobenzene	146	80-120	S	%Rec	5	9/9/2016 10:22:28 AM	B37093

Total TPH = 32,360 mg/Kg

EXCAVATED

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609432

Date Reported: 9/13/2016

CLIENT: Blagg Engineering

Client Sample ID: 2 @ 1' (TOR)

Project: SIMS MESA 6" PIPELINE RELEASE

Collection Date: 9/8/2016 11:30:00 AM

Lab ID: 1609432-002

Matrix: MEOH (SOIL)

Received Date: 9/9/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2016 10:32:05 AM	27414
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/9/2016 11:42:11 AM	27417
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/9/2016 11:42:11 AM	27417
Surr: DNOP	105	70-130		%Rec	1	9/9/2016 11:42:11 AM	27417
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	9/9/2016 10:45:57 AM	R37093
Surr: BFB	88.7	68.3-144		%Rec	1	9/9/2016 10:45:57 AM	R37093
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.021		mg/Kg	1	9/9/2016 10:45:57 AM	B37093
Toluene	ND	0.042		mg/Kg	1	9/9/2016 10:45:57 AM	B37093
Ethylbenzene	ND	0.042		mg/Kg	1	9/9/2016 10:45:57 AM	B37093
Xylenes, Total	ND	0.084		mg/Kg	1	9/9/2016 10:45:57 AM	B37093
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	9/9/2016 10:45:57 AM	B37093

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609432

Date Reported: 9/13/2016

CLIENT: Blagg Engineering

Client Sample ID: 3PC @ 1' (beneath impact path)

Project: SIMS MESA 6" PIPELINE RELEASE

Collection Date: 9/8/2016 11:45:00 AM

Lab ID: 1609432-003

Matrix: MEOH (SOIL)

Received Date: 9/9/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/9/2016 10:44:30 AM	27414
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	70	9.8		mg/Kg	1	9/9/2016 12:03:38 PM	27417
Motor Oil Range Organics (MRO)	330	49		mg/Kg	1	9/9/2016 12:03:38 PM	27417
Surr: DNOP	110	70-130		%Rec	1	9/9/2016 12:03:38 PM	27417
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	9/9/2016 11:09:24 AM	R37093
Surr: BFB	88.1	68.3-144		%Rec	1	9/9/2016 11:09:24 AM	R37093
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.021		mg/Kg	1	9/9/2016 11:09:24 AM	B37093
Toluene	ND	0.042		mg/Kg	1	9/9/2016 11:09:24 AM	B37093
Ethylbenzene	ND	0.042		mg/Kg	1	9/9/2016 11:09:24 AM	B37093
Xylenes, Total	ND	0.084		mg/Kg	1	9/9/2016 11:09:24 AM	B37093
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	9/9/2016 11:09:24 AM	B37093

Total TPH = 400 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 times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609593

Date Reported: 9/14/2016

CLIENT: Blagg Engineering

Client Sample ID: 3PC-SW (East) @ 2'-4'-6'

Project: Sims Mesa 6" Pipeline Release

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

Lab ID: 1609593-001

Matrix: MEOH (SOIL)

Received Date: 9/13/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/13/2016 11:00:03 AM	27462
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	560	100		mg/Kg	10	9/13/2016 12:53:02 PM	27460
Motor Oil Range Organics (MRO)	1900	500		mg/Kg	10	9/13/2016 12:53:02 PM	27460
Surr: DNOP	0	70-130	S	%Rec	10	9/13/2016 12:53:02 PM	27460
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	21	5.5		mg/Kg	1	9/13/2016 10:06:15 AM	27448
Surr: BFB	174	68.3-144	S	%Rec	1	9/13/2016 10:06:15 AM	27448
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.028		mg/Kg	1	9/13/2016 10:06:15 AM	27448
Toluene	ND	0.055		mg/Kg	1	9/13/2016 10:06:15 AM	27448
Ethylbenzene	ND	0.055		mg/Kg	1	9/13/2016 10:06:15 AM	27448
Xylenes, Total	0.23	0.11		mg/Kg	1	9/13/2016 10:06:15 AM	27448
Surr: 4-Bromofluorobenzene	118	80-120		%Rec	1	9/13/2016 10:06:15 AM	27448

Total TPH = 2,481 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 times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1609593

Date Reported: 9/14/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: 3PC-SW (West) @ 2'-4'-6'

Project: Sims Mesa 6" Pipeline Release

Collection Date: 9/12/2016 12:05:00 PM

Lab ID: 1609593-002

Matrix: MEOH (SOIL)

Received Date: 9/13/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	260	30		mg/Kg	20	9/13/2016 11:12:28 AM	27462
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	22	9.8		mg/Kg	1	9/13/2016 11:04:17 AM	27460
Motor Oil Range Organics (MRO)	95	49		mg/Kg	1	9/13/2016 11:04:17 AM	27460
Surr: DNOP	111	70-130		%Rec	1	9/13/2016 11:04:17 AM	27460
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/13/2016 10:29:44 AM	27448
Surr: BFB	91.0	68.3-144		%Rec	1	9/13/2016 10:29:44 AM	27448
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.020		mg/Kg	1	9/13/2016 10:29:44 AM	27448
Toluene	ND	0.041		mg/Kg	1	9/13/2016 10:29:44 AM	27448
Ethylbenzene	ND	0.041		mg/Kg	1	9/13/2016 10:29:44 AM	27448
Xylenes, Total	ND	0.081		mg/Kg	1	9/13/2016 10:29:44 AM	27448
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	9/13/2016 10:29:44 AM	27448

Total TPH = 281 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 times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1609593

Date Reported: 9/14/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: 3 PC trench @ 6'

Project: Sims Mesa 6" Pipeline Release

Collection Date: 9/12/2016 12:10:00 PM

Lab ID: 1609593-003

Matrix: MEOH (SOIL)

Received Date: 9/13/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	170	30		mg/Kg	20	9/13/2016 11:24:52 AM	27462
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	260	98		mg/Kg	10	9/13/2016 10:20:49 AM	27460
Motor Oil Range Organics (MRO)	1300	490		mg/Kg	10	9/13/2016 10:20:49 AM	27460
Surr: DNOP	0	70-130	S	%Rec	10	9/13/2016 10:20:49 AM	27460
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	9/13/2016 10:53:13 AM	27448
Surr: BFB	92.8	68.3-144		%Rec	1	9/13/2016 10:53:13 AM	27448
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.021		mg/Kg	1	9/13/2016 10:53:13 AM	27448
Toluene	ND	0.042		mg/Kg	1	9/13/2016 10:53:13 AM	27448
Ethylbenzene	ND	0.042		mg/Kg	1	9/13/2016 10:53:13 AM	27448
Xylenes, Total	ND	0.084		mg/Kg	1	9/13/2016 10:53:13 AM	27448
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	9/13/2016 10:53:13 AM	27448

Total TPH = 1,730 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 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

Turn-Around Time:

☐ Standard☒ Rush

24

HR.

Project Name:

SIMS MESA 6" PIPELINE RELEASE

Project #:

Project Manager:

NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 78

Phone #: (505) 632-1199

nail or Fax#:

VQC Package:

☐ Standard ☐ Level 4 (Full Validation)

credit:

NELAP ☐ Other

EDD (Type)

[illegible]

ate:	Time:	Relinquished by:
------	-------	------------------

ate:	Time:
26/16	1-800

Relinquished by:

Received by:

Date	Time
------	------

Date Time
11/6/12 5

Remarks:

**BILL DIRECTLY TO BP USING THE CIRCLED CONTACT WITH
CORRESPONDING VID & REFERENCE # WHEN APPLICABLE:**

Vance Hixon

VID: VHIXONEVB2

Steve Moskal

VMOS6HOFEC

John Ritchie

VDRINKIWA1

Reference #

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.

Client: **BLAGG ENGR. / BP AMERICA**

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other☐ EDD (Type)

Turn-Around Time:

SAME

☐ Standard

☒ Rush

DAY

Project Name:

SIMS MESA 6" PIPELINE RELEASE

Project #:

Project Manager:

NELSON VELEZ

Sampler: **NELSON VELEZ**

On Ice: ☒ Yes ☐ No

Sample Temperature: 29

[illegible]

Date: 9/8/16	Time: 1950	Relinquished by: [Signature]	Received by: Christ Valt	Date 9/8/16	Time 1950
Date: 9/8/16	Time: 2100	Relinquished by: [Signature]	Received by: [Signature]	Date 09/08/16	Time 0730

Remarks:	BILL DIRECTLY TO BP USING THE CIRCLED CONTACT WITH CORRESPONDING VID & REFERENCE # WHEN APPLICABLE:
----------	--

Vance Hixon	Steve Moskal	John Ritchie
VID: VHIXONEVB2	VMOS6HQFEC	VDRINKIWA1

Reference #

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.

Chain-of-Custody Record

Client: **BLAGG ENGR. / BP AMERICA**

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

mail or Fax#

A/QC Package

☒ Standard ☐ Level 4 (Full Validation)

ccreditation:

☐ NELAP ☐ Other

EDD (Type)

Turn-Around Time:

SAME DAY

☐ Standard ☒ Rush

Project Name:

SIMS MESA 6" PIPELINE RELEASE

Project #:

Project Manager:

NELSON VELEZ

Sampler: **NELSON VELEZ**

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.3

[illegible]

ste:	Time:	Relinquished by:	Received by:	Date	Time
7/12/16	1535	[Signature]	Christina White	9/12/16	1535
ste:	Time:	Relinquished by:	Received by:	Date	Time
12/11/16	1848	[Signature]	Lindsay Concha	09/13/16	0815

Remarks: BILL DIRECTLY TO BP USING THE CIRCLED CONTACT WITH
CORRESPONDING VID & REFERENCE # WHEN APPLICABLE:

Vance Hixon **Steve Moskal** John Ritchie

VID: VHIXONEVBZ VMOS5HCFC VDRINKIWA1

Reference #

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.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1608F99

01-Sep-16

Client: Blagg Engineering
Project: Sims Mesa 6" Pipeline Release

Sample ID	MB-27234	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	27234	RunNo:	36848					
Prep Date:	8/29/2016	Analysis Date:	8/29/2016	SeqNo:	1142299	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-27234	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	27234	RunNo:	36848					
Prep Date:	8/29/2016	Analysis Date:	8/29/2016	SeqNo:	1142300	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.6	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#: 1608F99

01-Sep-16

Client: Blagg Engineering
Project: Sims Mesa 6" Pipeline Release

Sample ID	LCS-27220		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 27220		RunNo: 36852					
Prep Date:	8/29/2016		Analysis Date: 8/30/2016		SeqNo: 1142472		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	90.4	62.6	124			
Surr: DNOP	4.3		5.000		86.1	70	130			

Sample ID	MB-27220		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	27220		RunNo:	36852				
Prep Date:	8/29/2016		Analysis Date:	8/30/2016		SeqNo:	1142473		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	11		10.00		110	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#: 1608F99

01-Sep-16

Client: Blagg Engineering
Project: Sims Mesa 6" Pipeline Release

Sample ID	MB-27186	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	27186	RunNo:	36828					
Prep Date:	8/26/2016	Analysis Date:	8/29/2016	SeqNo:	1141862	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	850		1000		84.6	68.3	144			

Sample ID	LCS-27186	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	27186	RunNo:	36828					
Prep Date:	8/26/2016	Analysis Date:	8/29/2016	SeqNo:	1141863	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.4	80	120			
Surr: BFB	910		1000		90.7	68.3	144			

Sample ID	B25	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G36828	RunNo:	36828					
Prep Date:		Analysis Date:	8/29/2016	SeqNo:	1141885	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	860		1000		85.7	68.3	144			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G36828	RunNo:	36828					
Prep Date:		Analysis Date:	8/29/2016	SeqNo:	1141886	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	80	120			
Surr: BFB	940		1000		94.0	68.3	144			

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#: 1608F99

01-Sep-16

Client: Blagg Engineering
Project: Sims Mesa 6" Pipeline Release

Sample ID	MB-27186		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	27186		RunNo:	36828			
Prep Date:	8/26/2016		Analysis Date:	8/29/2016		SeqNo:	1141891		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	LCS-27186		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	27186		RunNo:	36828			
Prep Date:	8/26/2016		Analysis Date:	8/29/2016		SeqNo:	1141892		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.0	75.3	123			
Toluene	0.90	0.050	1.000	0	90.0	80	124			
Ethylbenzene	0.92	0.050	1.000	0	92.2	82.8	121			
Xylenes, Total	2.8	0.10	3.000	0	92.5	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	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
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: **1608F99**

RcptNo: **1**

Received by/date:

Am **08/27/16**

Logged By: **Ashley Gallegos**

8/27/2016 11:25:00 AM

Ag

Completed By: **Ashley Gallegos**

8/29/2016 8:39:02 AM

Ag

Reviewed By:

jc **08/29/16**

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 $>0^{\circ}\text{C}$ 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609432

13-Sep-16

Client: Blagg Engineering
Project: SIMS MESA 6" PIPELINE RELEASE

Sample ID	MB-27414	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	27414	RunNo:	37114					
Prep Date:	9/8/2016	Analysis Date:	9/9/2016	SeqNo:	1150727	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-27414	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	27414	RunNo:	37114					
Prep Date:	9/8/2016	Analysis Date:	9/9/2016	SeqNo:	1150729	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
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#: 1609432

13-Sep-16

Client: Blagg Engineering
Project: SIMS MESA 6" PIPELINE RELEASE

Sample ID	LCS-27417	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	27417	RunNo:	37089					
Prep Date:	9/9/2016	Analysis Date:	9/9/2016	SeqNo:	1149948	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	93.0	62.6	124			
Surr: DNOP	5.1		5.000		102	70	130			

Sample ID	MB-27417	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	27417	RunNo:	37089					
Prep Date:	9/9/2016	Analysis Date:	9/9/2016	SeqNo:	1149949	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		102	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#: 1609432

13-Sep-16

Client: Blagg Engineering
Project: SIMS MESA 6" PIPELINE RELEASE

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R37093	RunNo:	37093					
Prep Date:		Analysis Date:	9/9/2016	SeqNo:	1150664	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.6	80	120			
Surr: BFB	990		1000		98.9	68.3	144			

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R37093	RunNo:	37093					
Prep Date:		Analysis Date:	9/9/2016	SeqNo:	1150665	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	900		1000		89.7	68.3	144			

Sample ID	1609432-003A MS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	3PC @ 1' (beneath i	Batch ID:	R37093	RunNo:	37093					
Prep Date:		Analysis Date:	9/9/2016	SeqNo:	1150668	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.2	21.01	0	99.9	59.3	143			
Surr: BFB	810		840.3		96.6	68.3	144			

Sample ID	1609432-003A MSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	3PC @ 1' (beneath i	Batch ID:	R37093	RunNo:	37093					
Prep Date:		Analysis Date:	9/9/2016	SeqNo:	1150669	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.2	21.01	0	98.1	59.3	143	1.78	20	
Surr: BFB	810		840.3		96.9	68.3	144	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#: 1609432

13-Sep-16

Client: Blagg Engineering
Project: SIMS MESA 6" PIPELINE RELEASE

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B37093	RunNo:	37093					
Prep Date:		Analysis Date:	9/9/2016	SeqNo:	1150672	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.6	75.3	123			
Toluene	0.96	0.050	1.000	0	95.8	80	124			
Ethylbenzene	0.98	0.050	1.000	0	98.2	82.8	121			
Xylenes, Total	2.9	0.10	3.000	0	97.9	83.9	122			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	80	120			

Sample ID	1609432-002A MS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	2 @ 1' (TOR)	Batch ID:	B37093	RunNo:	37093					
Prep Date:		Analysis Date:	9/9/2016	SeqNo:	1150676	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.78	0.021	0.8432	0	92.5	71.5	122			
Toluene	0.79	0.042	0.8432	0	93.2	71.2	123			
Ethylbenzene	0.81	0.042	0.8432	0	95.5	75.2	130			
Xylenes, Total	2.4	0.084	2.530	0	94.7	72.4	131			
Surr: 4-Bromofluorobenzene	0.93		0.8432		110	80	120			

Sample ID	1609432-002A MSD			SampType:	MSD						TestCode:	EPA Method 8021B: Volatiles				
Client ID:	2 @ 1' (TOR)			Batch ID:	B37093			RunNo:	37093							
Prep Date:				Analysis Date:	9/9/2016			SeqNo:	1150677		Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual						
Benzene	0.81	0.021	0.8432	0	96.0	71.5	122	3.67	20							
Toluene	0.81	0.042	0.8432	0	96.1	71.2	123	3.04	20							
Ethylbenzene	0.81	0.042	0.8432	0	95.8	75.2	130	0.232	20							
Xylenes, Total	2.4	0.084	2.530	0	95.0	72.4	131	0.353	20							
Surr: 4-Bromofluorobenzene	0.94		0.8432		112	80	120	0	0							

Sample ID	RB	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID: B37093			RunNo: 37093					
Prep Date:		Analysis Date: 9/9/2016			SeqNo: 1150679		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		109	80	120			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| 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
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: 1609432

RcptNo: 1

Received by/date:	AG	09/08/16
Logged By:	Lindsay Mangin	9/8/2016 7:30:00 AM
Completed By:	Lindsay Mangin	9/9/2016 8:31:43 AM
Reviewed By:	JC 09/09/16	

Chain of Custody

- | | | | |
|--|---|-----------------------------|---|
| 1. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 2. Is Chain of Custody complete? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 3. How was the sample delivered? | Courier | | |

Log In

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

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

Special Handling (if applicable)

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

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

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.9	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609593

14-Sep-16

Client: Blagg Engineering
Project: Sims Mesa 6" Pipeline Release

Sample ID	MB-27462	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	27462	RunNo:	37167					
Prep Date:	9/13/2016	Analysis Date:	9/13/2016	SeqNo:	1152914	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-27462	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	27462	RunNo:	37167					
Prep Date:	9/13/2016	Analysis Date:	9/13/2016	SeqNo:	1152915	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	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#: 1609593

14-Sep-16

Client: Blagg Engineering
Project: Sims Mesa 6" Pipeline Release

Sample ID	LCS-27460		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	27460		RunNo:	37139				
Prep Date:	9/13/2016		Analysis Date:	9/13/2016		SeqNo:	1151802		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	46	10	50.00	0	92.2	62.6	124				
Surr: DNOP	5.0		5.000		100	70	130				

Sample ID	MB-27460	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	27460		RunNo:	37139				
Prep Date:	9/13/2016	Analysis Date:	9/13/2016		SeqNo:	1151803	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	70	130			

Sample ID	LCS-27445		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 27445		RunNo: 37139					
Prep Date:	9/12/2016		Analysis Date: 9/13/2016		SeqNo: 1152405		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		5.000		102	70	130			

Sample ID	MB-27445		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 27445		RunNo: 37139					
Prep Date:	9/12/2016		Analysis Date: 9/13/2016		SeqNo: 1152406		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		103	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#: 1609593

14-Sep-16

Client: Blagg Engineering
Project: Sims Mesa 6" Pipeline Release

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. | 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#: 1609593

14-Sep-16

Client: Blagg Engineering
Project: Sims Mesa 6" Pipeline Release

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. | 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 |

Sample Log-In Check List

Client Name: **BLAGG**

Work Order Number: **1609593**

RcptNo: **1**

Received by/date:

Logged By: **Ashley Gallegos**

9/13/2016 8:15:00 AM

Completed By: **Ashley Gallegos**

9/13/2016 8:29:18 AM

Reviewed By:

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 $>0^{\circ}\text{C}$ 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	3.3	Good	Yes			