

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: Mudge A 005A	Facility Type: Natural gas well	
Surface Owner: Federal	Mineral Owner: Federal	API No. 3004522509

LOCATION OF RELEASE

Unit Letter C	Section 3	Township 31N	Range 11W	Feet from the 815	North/South Line North	Feet from the 1,663	East/West Line West	County: San Juan
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Latitude 36.931638° Longitude -107.980850°



NATURE OF RELEASE

Type of Release: none	Volume of Release: unknown	Volume Recovered: N/A
Source of Release: below grade tank – 70 bbl	Date and Hour of Occurrence: none	Date and Hour of Discovery: none
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		

Describe Cause of Problem and Remedial Action Taken.* Sampling of the soil beneath the BGT was done during removal. Soil analysis resulted for TPH, BTEX and chlorides with all but TPH below BGT closure standards. Following the spill and release guidelines, the site is ranked with a closure standard of 1,000 ppm TPH requiring no further action. Further, subsequent sampling a a depth of 7' indicates BGT closure. Field reports and laboratory results are attached.

Describe Area Affected and Cleanup Action Taken.* No further action required. Final laboratory analysis determined no remedial 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.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Steve Moskal	Approved by Environmental Specialist: 	
Title: Field Environmental Coordinator	Approval Date: <u>8/10/2017</u>	Expiration Date:
E-mail Address: steven.moskal@bp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: June 22, 2017 Phone: 505-326-9497		

* Attach Additional Sheets If Necessary

NCS1719247835

OIL CONS. DIV DIST. 3
JUN 22 2017

CLIENT: BP	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	API #: 3004522509 TANK ID (if applicable): A
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FIELD REPORT:

(circle one): BGT CONFIRMATION / RELEASE INVESTIGATION / OTHER:

PAGE #: **1** of **1**

SITE INFORMATION:	SITE NAME: MUDGE A # 5A	DATE STARTED: 04/19/17
QUAD/UNIT: C SEC: 3 TWP: 31N RNG: 11W PM: NM CNTY: SJ ST: NM		DATE FINISHED:
1/4 -1/4/FOOTAGE: 815'N / 1,663'W NE/NW LEASE TYPE: FEDERAL / STATE / FEE / INDIAN		ENVIRONMENTAL SPECIALIST(S): NJV
LEASE #: SF078040	PROD. FORMATION: PC/MV	CONTRACTOR: STRIKE MBF - R. POWELL

REFERENCE POINT:	WELL HEAD (W.H.) GPS COORD.: 36.93183 X 107.98105	GL ELEV.: 6,132'
1) 70 BGT (SW/DB)	GPS COORD.: 36.931638 X 107.980850	DISTANCE/BEARING FROM WH.: 93.5', S36.5E
2)	GPS COORD.:	DISTANCE/BEARING FROM WH.:
3)	GPS COORD.:	DISTANCE/BEARING FROM WH.:
4)	GPS COORD.:	DISTANCE/BEARING FROM WH.:

SAMPLING DATA:	CHAIN OF CUSTODY RECORD(S) # OR LAB USED: HALL	OVM READING (ppm)
1) SAMPLE ID: 5PC - TB @ 5.5' (70)	SAMPLE DATE: 04/19/17 SAMPLE TIME: 1425	LAB ANALYSIS: 8015B/8021B/300.0 (CI) 4,028
2) SAMPLE ID: 5PC - TB @ 7' (70)	SAMPLE DATE: 04/19/17 SAMPLE TIME: 1440	LAB ANALYSIS: 8015B/8021B/300.0 (CI) 2,682
3) SAMPLE ID:	SAMPLE DATE: SAMPLE TIME:	LAB ANALYSIS:
4) SAMPLE ID:	SAMPLE DATE: SAMPLE TIME:	LAB ANALYSIS:

SOIL DESCRIPTION:	SOIL TYPE: SAND SILTY SAND SILT SILTY CLAY CLAY GRAVEL / OTHER BEDROCK (CLAYSTONE/SHALE)
SOIL COLOR: NATIVE SOILS - OLIVE GRAY	PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC COHESIVE MEDIUM PLASTIC HIGHLY PLASTIC
COHESION (ALL OTHERS): NON COHESIVE SLIGHTLY COHESIVE COHESIVE HIGHLY COHESIVE	DENSITY (COHESIVE CLAYS & SILTS): SOFT FIRM STIFF / VERY STIFF HARD
CONSISTENCY (NON COHESIVE SOILS): LOOSE FIRM DENSE VERY DENSE	HC ODOR DETECTED: YES NO EXPLANATION - DISCOLORED SOILS & BEDROCK.
MOISTURE: DRY SLIGHTLY MOIST MOIST / WET SATURATED SUPER SATURATED	ANY AREAS DISPLAYING WETNESS: YES / NO EXPLANATION - IMMEDIATELY BENEATH BGT.
SAMPLE TYPE: GRAB COMPOSITE # OF PTS. 5	DISCOLORATION/STAINING OBSERVED: YES NO EXPLANATION - MEDIUM GRAY TO BLACK.

SITE OBSERVATIONS:	LOST INTEGRITY OF EQUIPMENT: YES NO EXPLANATION - POSSIBLY FROM BOTTOM OF INSPECTION PORT PIPING.
APPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED: YES NO EXPLANATION: PHYSICALLY VISIBLE & HYDROCARBON ODOR.	
EQUIPMENT SET OVER RECLAIMED AREA: YES NO EXPLANATION - 105 BBL SHALLOW LOW PROFILE ABOVE-GRADE TANK TO BE SET ATOP BGT LOCATION.	
OTHER: NMOC D OR BLM REPS. NOT PRESENT TO WITNESS CONFIRMATION SAMPLING.	

SOIL IMPACT DIMENSION ESTIMATION: 10 ft. X 10 ft. X 2 ft.	EXCAVATION ESTIMATION (Cubic Yards): 5 - 10
DEPTH TO GROUNDWATER: >100'	NEAREST WATER SOURCE: >1,000' NEAREST SURFACE WATER: <1,000' NMOC D TPH CLOSURE STD: 1,000 ppm

SITE SKETCH

BGT Located : off on site
PLOT PLAN circle: **attached**

OVM CALIB. READ. = 100.0 ppm	RF=0.52
OVM CALIB. GAS = 100 ppm	
TIME: 2:50 am/pm	DATE: 04/19/17

MISCELL. NOTES

WO:

REF #: **P - 667**

VID: **VHIXONEVB2**

PJ #:

Permit date(s): **06/14/10**

OCD Appr. date(s): **05/02/16**

Tank ID	OVM = Organic Vapor Meter ppm = parts per million
A	BGT Sidewalls Visible: Y / N
	BGT Sidewalls Visible: Y / N
	BGT Sidewalls Visible: Y / N

Magnetic declination: **10° E**

NOTES: **GOOGLE EARTH IMAGERY DATE: 3/15/2015.**

ONSITE: **04/19/17**

Analytical Report

Lab Order 1704890

Date Reported: 4/21/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: 5PC-TB@5.5' (70)

Project: Mudge A 5A

Collection Date: 4/19/2017 2:25:00 PM

Lab ID: 1704890-001

Matrix: MEOH (SOIL)

Received Date: 4/20/2017 6:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	4/20/2017 11:26:33 AM	31339
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	13	9.5		mg/Kg	1	4/20/2017 9:15:34 AM	31335
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/20/2017 9:15:34 AM	31335
Surr: DNOP	102	70-130		%Rec	1	4/20/2017 9:15:34 AM	31335
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	650	67		mg/Kg	20	4/20/2017 12:30:52 PM	G42253
Surr: BFB	249	54-150	S	%Rec	20	4/20/2017 12:30:52 PM	G42253
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.88	0.33		mg/Kg	20	4/20/2017 12:30:52 PM	B42253
Toluene	ND	0.67		mg/Kg	20	4/20/2017 12:30:52 PM	B42253
Ethylbenzene	ND	0.67		mg/Kg	20	4/20/2017 12:30:52 PM	B42253
Xylenes, Total	2.8	1.3		mg/Kg	20	4/20/2017 12:30:52 PM	B42253
Surr: 4-Bromofluorobenzene	123	66.6-132		%Rec	20	4/20/2017 12:30:52 PM	B42253

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 1704887

Date Reported: 4/21/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: 5PC-TB@7(70)

Project: Mudge A 5A

Collection Date: 4/19/2017 2:40:00 PM

Lab ID: 1704887-001

Matrix: MEOH (SOIL)

Received Date: 4/20/2017 6:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	4/20/2017 10:12:04 AM	31339
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	13	9.9		mg/Kg	1	4/20/2017 8:53:36 AM	31335
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/20/2017 8:53:36 AM	31335
Surr: DNOP	104	70-130		%Rec	1	4/20/2017 8:53:36 AM	31335
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	20	19		mg/Kg	5	4/20/2017 10:09:10 AM	G42253
Surr: BFB	107	54-150		%Rec	5	4/20/2017 10:09:10 AM	G42253
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.095		mg/Kg	5	4/20/2017 10:09:10 AM	B42253
Toluene	ND	0.19		mg/Kg	5	4/20/2017 10:09:10 AM	B42253
Ethylbenzene	ND	0.19		mg/Kg	5	4/20/2017 10:09:10 AM	B42253
Xylenes, Total	0.76	0.38		mg/Kg	5	4/20/2017 10:09:10 AM	B42253
Surr: 4-Bromofluorobenzene	114	66.6-132		%Rec	5	4/20/2017 10:09:10 AM	B42253

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

Chain-of-Custody Record

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) _____

[illegible]

Reference # P - 667

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**

email or Fax#: _____

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

Accreditation: ☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

SAME DAY

☐ Standard ☒ Rush

Project Name:

MUDGE A # 5A

Project #:

Project Manager:

NELSON VELEZ

Sampler:

NELSON VELEZ

Container Type and #

402-1

Preservative Type

COOL

Date

4/19/17

Time

1440

Matrix

SOIL

Sample Request ID

SPC-T8E7 (70)

Relinquished by:

John V

Date:

4/19/17

Time:

1600

Relinquished by:

John V

Date:

4/19/17

Time:

1600

Received by:

Mustache

Date:

4/19/17

Time:

1600

Reference #

P - 667



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

BTEX + MTBE + TPH (8021B)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH (8310 or 8270SIMS)	
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 (soil - 300.0 / water - 300.1)	
Grab sample	
# pt. composite sample	5
Air Bubbles (Y or N)	

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#: 1704890

21-Apr-17

Client: Blagg Engineering

Project: Mudge A 5A

Sample ID	MB-31339		SampType:	mbk		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	31339		RunNo:	42250				
Prep Date:	4/20/2017		Analysis Date:	4/20/2017		SeqNo:	1328650		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-31339		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 31339		RunNo: 42250					
Prep Date:	4/20/2017		Analysis Date: 4/20/2017		SeqNo: 1328651		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	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#: 1704890

21-Apr-17

Client: Blagg Engineering

Project: Mudge A 5A

Sample ID	MB-31335	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	31335	RunNo:	42241					
Prep Date:	4/20/2017	Analysis Date:	4/20/2017	SeqNo:	1327098	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		101	70	130			

Sample ID	LCS-31335	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	31335	RunNo:	42241					
Prep Date:	4/20/2017	Analysis Date:	4/20/2017	SeqNo:	1327258	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.2	63.8	116			
Surr: DNOP	4.6		5.000		91.1	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
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#: 1704890

21-Apr-17

Client: Blagg Engineering

Project: Mudge A 5A

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G42253	RunNo:	42253					
Prep Date:		Analysis Date:	4/20/2017	SeqNo:	1327995	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	950		1000		95.0	54	150			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G42253	RunNo:	42253					
Prep Date:		Analysis Date:	4/20/2017	SeqNo:	1327996	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.3	76.4	125			
Surr: BFB	1000		1000		103	54	150			

Sample ID	MB-31325	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31325	RunNo:	42253					
Prep Date:	4/19/2017	Analysis Date:	4/20/2017	SeqNo:	1327999	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		94.2	54	150			

Sample ID	LCS-31325	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31325	RunNo:	42253					
Prep Date:	4/19/2017	Analysis Date:	4/20/2017	SeqNo:	1328000	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		103	54	150			

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: 1704890

RcptNo: 1

Received By: Lindsay Mangin 4/20/2017 6:40:00 AM

Completed By: Lindsay Mangin 4/20/2017 7:04:23 AM

Reviewed By: *At 04/20/17*

[Signature]
[Signature]

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:	<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	1.4	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704890

21-Apr-17

Client: Blagg Engineering

Project: Mudge A 5A

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B42253	RunNo:	42253					
Prep Date:		Analysis Date:	4/20/2017	SeqNo:	1328028	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		114	66.6	132			

Sample ID	MB-31325	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	31325	RunNo:	42253					
Prep Date:	4/19/2017	Analysis Date:	4/20/2017	SeqNo:	1328032	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		115	66.6	132			

Sample ID	LCS-31325	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	31325	RunNo:	42253					
Prep Date:	4/19/2017	Analysis Date:	4/20/2017	SeqNo:	1328033	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		113	66.6	132			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B42253	RunNo:	42253					
Prep Date:		Analysis Date:	4/20/2017	SeqNo:	1328058	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	80	120			
Toluene	0.96	0.050	1.000	0	96.4	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.2	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.4	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	66.6	132			

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#: 1704887

21-Apr-17

Client: Blagg Engineering

Project: Mudge A 5A

Sample ID	MB-31339	SampType:	mbk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31339	RunNo:	42250					
Prep Date:	4/20/2017	Analysis Date:	4/20/2017	SeqNo:	1328650	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31339	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31339	RunNo:	42250					
Prep Date:	4/20/2017	Analysis Date:	4/20/2017	SeqNo:	1328651	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	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#: 1704887

21-Apr-17

Client: Blagg Engineering

Project: Mudge A 5A

Sample ID	MB-31335	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	31335	RunNo:	42241					
Prep Date:	4/20/2017	Analysis Date:	4/20/2017	SeqNo:	1327098	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		101	70	130			

Sample ID	LCS-31335	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	31335	RunNo:	42241					
Prep Date:	4/20/2017	Analysis Date:	4/20/2017	SeqNo:	1327258	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	47	10	50.00	0	93.2	63.8	116			
Surr: DNOP	4.6		5.000		91.1	70	130			

Sample ID	1704887-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	5PC-TB@7'(70)	Batch ID:	31335	RunNo:	42241					
Prep Date:	4/20/2017	Analysis Date:	4/20/2017	SeqNo:	1327760	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	50	9.5	47.66	13.42	77.6	51.6	130			
Surr: DNOP	4.5		4.766		93.6	70	130			

Sample ID	1704887-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	5PC-TB@7'(70)	Batch ID:	31335	RunNo:	42241					
Prep Date:	4/20/2017	Analysis Date:	4/20/2017	SeqNo:	1327761	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	57	9.9	49.65	13.42	87.3	51.6	130	11.8	20	
Surr: DNOP	5.0		4.965		99.8	70	130	0	0	

Qualifiers:

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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#: 1704887

21-Apr-17

Client: Blagg Engineering

Project: Mudge A 5A

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G42253	RunNo:	42253					
Prep Date:		Analysis Date:	4/20/2017	SeqNo:	1327995	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	950		1000		95.0	54	150			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G42253	RunNo:	42253					
Prep Date:		Analysis Date:	4/20/2017	SeqNo:	1327996	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.3	76.4	125			
Surr: BFB	1000		1000		103	54	150			

Sample ID	1704887-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	5PC-TB@7'(70)	Batch ID:	G42253	RunNo:	42253					
Prep Date:		Analysis Date:	4/20/2017	SeqNo:	1327997	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	120	19	95.35	20.44	99.7	61.3	150			
Surr: BFB	4500		3814		117	54	150			

Sample ID	1704887-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	5PC-TB@7'(70)	Batch ID:	G42253	RunNo:	42253					
Prep Date:		Analysis Date:	4/20/2017	SeqNo:	1327998	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	110	19	95.35	20.44	97.9	61.3	150	1.50	20	
Surr: BFB	4400		3814		115	54	150	0	0	

Sample ID	MB-31325	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31325	RunNo:	42253					
Prep Date:	4/19/2017	Analysis Date:	4/20/2017	SeqNo:	1327999	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		94.2	54	150			

Sample ID	LCS-31325	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31325	RunNo:	42253					
Prep Date:	4/19/2017	Analysis Date:	4/20/2017	SeqNo:	1328000	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		103	54	150			

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#: 1704887

21-Apr-17

Client: Blagg Engineering

Project: Mudge A 5A

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B42253	RunNo:	42253					
Prep Date:		Analysis Date:	4/20/2017	SeqNo:	1328028	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		114	66.6	132			

Sample ID	MB-31325	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	31325	RunNo:	42253					
Prep Date:	4/19/2017	Analysis Date:	4/20/2017	SeqNo:	1328032	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene	1.1		1.000		115	66.6	132			
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Sample ID	LCS-31325	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	31325	RunNo:	42253					
Prep Date:	4/19/2017	Analysis Date:	4/20/2017	SeqNo:	1328033	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene	1.1		1.000		113	66.6	132			
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Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B42253	RunNo:	42253					
Prep Date:		Analysis Date:	4/20/2017	SeqNo:	1328058	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	1.0	0.025	1.000	0	101	80	120			
Toluene	0.96	0.050	1.000	0	96.4	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.2	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.4	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	66.6	132			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
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- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



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

Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1704887

ReptNo: 1

Received By: Lindsay Mangin 4/20/2017 6:40:00 AM

Completed By: Lindsay Mangin 4/20/2017 6:53:45 AM

Reviewed By: AR 04/20/17

[Signature]

[Signature]

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:	<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	1.4	Good	Yes			

