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 Department

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

Incident ID	
District RP	
Facility ID	
Application ID	

## **Release Notification**

### **Responsible Party**

Responsible Party: BP America Production Co.	OGRID: 778	Subsequent Report: SVE
Contact Name: Steve Moskal	Contact Telephone: (505) 330-9179	
Contact email: steven.moskal@bpx.com	Incident # (assigned by OCD) nVF	1714348687
Contact mailing address: 1199 Main Street, Suite 101, Durango, CO 81301		

### **Location of Release Source**

Latitude: 36.918572°

Longitude: -<u>107.972167°</u> (NAD 83 in decimal degrees to 5 decimal places)

Site Name: Mudge A 002	Site Type: Natural Gas Production Well Pad
Date Release Discovered: April 25, 2017	API#: 30-045-10948

Unit Letter	Section	Township	Range	County
А	10	T31N	R11W	San Juan

Surface Owner: State Federal Tribal Private (Name:

## Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)				
Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)		
Produced Water	Volume Released (bbls):	Volume Recovered (bbls):		
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No		
Condensate	Volume Released (bbls): Unknown	Volume Recovered (bbls):		
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)		
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)		

Cause of Release:

On February 12, 2018 BP proposed operation of a SVE system to complete site remediation of soil impacts using the previously installed SVE points. This plan was approved by NMOCD on February 16, 2018. After receiving an electric drop/meter from the City of Farmington, the SVE system was placed into initial operation on June 6, 2018. After initial individual testing on each of the SVE points, gas samples were collected on June 12, 2018 from both BH-2 and BH-3. Subsequent field emission testing on each of the SVE points has indicated that BH-2 appears to extract the greatest VOC's and this has remained the primary extraction point for the system. The attached report document site inspections, field observations, mass removal calculations and laboratory reports.

Page 2

### State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
🗌 Yes 🖾 No	
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

### **Initial Response**

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

 $\square$  The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

The released water absorbed into the ground surface.

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name:	Title:
Signature:	Date:
email: T	Selephone:
OCD Only	
Received by:	Date:

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?		
Did this release impact groundwater or surface water?		
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No	
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No	
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No	
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No	
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No	
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No	
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No	
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No	
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No	
Are the lateral extents of the release within a 100-year floodplain?		
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	🗌 Yes 🔀 No	

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

#### Characterization Report Checklist: Each of the following items must be included in the report.

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
Field data
Data table of soil contaminant concentration data
Depth to water determination
Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
Boring or excavation logs
Photographs including date and GIS information
Topographic/Aerial maps
Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141State of New MexicoPage 4Oil Conservation Division		Incident ID District RP Facility ID
		Application ID
regulations all operators are required to a public health or the environment. The ac failed to adequately investigate and remo	report and/or file certain release notifications and cceptance of a C-141 report by the OCD does not ediate contamination that pose a threat to groundw	nowledge and understand that pursuant to OCD rules and perform corrective actions for releases which may endanger relieve the operator of liability should their operations have vater, surface water, human health or the environment. In y for compliance with any other federal, state, or local laws
Printed Name:	Title:	
Signature:	Date:	
email:	Telephone:	
OCD Only		
Received by:	Dat	te:

Form C-141 Page 5 State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.
<ul> <li>Detailed description of proposed remediation technique</li> <li>Scaled sitemap with GPS coordinates showing delineation points</li> <li>Estimated volume of material to be remediated</li> <li>Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> <li>Continued Remediation operation and performance data</li> </ul>
<b>Deferral Requests Only:</b> Each of the following items must be confirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
Extents of contamination must be fully delineated.
Contamination does not cause an imminent risk to human health, the environment, or groundwater.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.
Printed Name: <u>Steve Moskal</u> Title: <u>Environmental Coordinator</u>
Signature:
email: <u>steven.moskal@bpx.com</u> Telephone: <u>505-330-9179</u>
OCD Only
Received by:         OCD         Date:         8/13/19
Approved With Attached Conditions of Approval Denied Deferral Approved
Signature: Date: 8/19/19

Form C-141 Page 6 State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

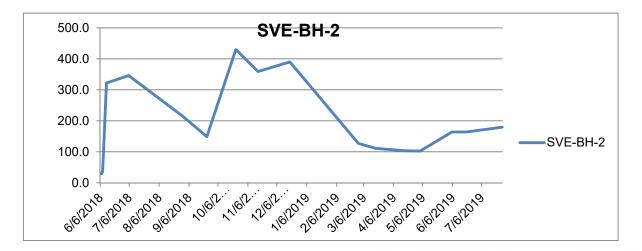
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

<b><u>Closure Report Attachment Checklist</u></b>	: Each of the following items	must be included in the closure report.
A scaled site and sampling diagram a	as described in 19.15.29.11 NM	MAC
Photographs of the remediated site p must be notified 2 days prior to liner insp		ne liner integrity if applicable (Note: appropriate OCD District offic
Laboratory analyses of final samplin	g (Note: appropriate ODC Dis	strict office must be notified 2 days prior to final sampling)
Description of remediation activities		
and regulations all operators are required to may endanger public health or the environ should their operations have failed to adeq human health or the environment. In addi compliance with any other federal, state, or restore, reclaim, and re-vegetate the impact	to report and/or file certain rele- ment. The acceptance of a C- quately investigate and remedia tion, OCD acceptance of a C-1 or local laws and/or regulations eted surface area to the condition	the best of my knowledge and understand that pursuant to OCD rule ease notifications and perform corrective actions for releases which 141 report by the OCD does not relieve the operator of liability ate contamination that pose a threat to groundwater, surface water, 141 report does not relieve the operator of responsibility for s. The responsible party acknowledges they must substantially ons that existed prior to the release or their final land use in when reclamation and re-vegetation are complete.
Printed Name:	Title:	
Signature:	Date:	
email:	Telephone:	
OCD Only		
CCD Only Received by:		Date:
Received by: Closure approval by the OCD does not re	elieve the responsible party of a threat to groundwater, surfa	f liability should their operations have failed to adequately investigate water, human health, or the environment nor does not relieve t
Received by: Closure approval by the OCD does not re and remediate contamination that poses a	elieve the responsible party of a threat to groundwater, surfa other federal, state, or local lay	f liability should their operations have failed to adequately investigate water, human health, or the environment nor does not relieve t ws and/or regulations.
Received by: Closure approval by the OCD does not re and remediate contamination that poses a responsible party of compliance with any o	elieve the responsible party of a threat to groundwater, surfa other federal, state, or local lay	f liability should their operations have failed to adequately investigate water, human health, or the environment nor does not relieve t ws and/or regulations.

# **BP America - Mudge A 002**

## Summary SVE System Monitoring Data

Date	SVE Pt.	Exhaust OVM (ppm)	Exhaust Vacuum (in)	Exhaust Rate (cfm)	System Operational at Time of Arrival?	H <sub>2</sub> O Drained from drum?	H <sub>2</sub> O Amt. Drained (Gal.)?	Comments
_								
6/6/2018	BH-1	26.2	48	NA	YES	NO	NA	Very little air flow from blow exhaust felt physically
6/7/2018	BH-1	1.3	47	50	YES	NO	NA	Same as above (SAA)
6/6/2018	BH-2	30.5	52	NA	YES	NO	NA	SAA
6/7/2018	BH-2	29.2	46	60	YES	NO	NA	SAA
6/6/2018	BH-3	19.3	51	60	YES	NO	NA	SAA
6/7/2018	BH-3	20.5	46	50	YES	NO	NA	SAA
6/6/2018	BH-4	15.3	56	NA	YES	NO	NA	SAA
6/7/2018	BH-4	5.3	46	50	YES	NO	NA	SAA
6/8/2018	BH-2	36.3	46	50	YES	NO	NA	SAA
6/11/2018	BH-3	30.0	46	50	YES	NO	NA	SAA
6/12/2018	BH-2	322	47	50	YES	NO	NA	SAA, collected air sample (BH-2)
6/13/2018	BH-3	179	47	50	YES	NO	NA	Dry drum, SAA (BH-3)
6/19/2018	BH-1	5.8	48	50	YES	NO	NA	SAA
6/27/2018	BH-3	86.4	48	50	YES	NO	NA	SAA
7/5/2018	BH-2	346	48	60	YES	NO	NA	SAA
7/13/2018	BH-4	65.1	48	60	YES	NO	NA	SAA
7/19/2018	BH-1	5.2	48	50	YES	NO	NA	SAA
8/29/2018	BH-2	217	48	50	YES	NO	NA	SAA
9/24/2018	BH-2	148.8	48	50	YES	NO	NA	SAA
10/24/2018	BH-2	430	48	50	YES	NO	NA	SAA
11/16/2018	BH-2	359	48	50	YES	NO	NA	SAA
12/19/2018	BH-2	390	50	50	YES	NO	NA	SAA
1/11/2019	BH-2	305	50	NA	YES	NO	NA	SAA
2/28/2019	BH-2	127 111	50	50	YES	NO	NA	Water in drum below drain plug
3/18/2019 4/17/2019	BH-2 BH-2	111 103.3	50 48	50 50	YES YES	NO NO	NA NA	SAA SAA
5/3/2019	BH-2	103.3	48 50	50	YES	NO	NA	SAA
6/5/2019	BH-2	164	49	50	YES	NO	NA	SAA
6/20/2019	BH-2	164	48	48	YES	NO	NA	Dry drum, collected air sample (BH-2)
7/27/2019	BH-2	179.3	49	50	YES	NO	NA	Dry drum







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

June 28, 2019

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

RE: MUDGE A 2

OrderNo.: 1906B64

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/21/2019 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 #NM0901

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**Analytical Report** Lab Order 1906B64

CLIENT: Blagg Engineering Project: MUDGE A 2 Lab ID: 1906B64-001 Analyses EPA METHOD 8260B: VOLATILES Benzene Toluene Ethylbenzene Methyl tert-butyl ether (MTBE) 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene 1,2-Dichloroethane (EDC) 1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene 2-Methylnaphthalene	Matrix: AIR Result 15 6.5 2.5 ND 0.48	Coll Re		æ: 6/2 æ: 6/2	E (BH-2) 0/2019 11:00:00 AM 1/2019 8:18:00 AM Date Analyzed	
Lab ID:       1906B64-001         Analyses         EPA METHOD 8260B: VOLATILES         Benzene         Toluene         Ethylbenzene         Methyl tert-butyl ether (MTBE)         1,2,4-Trimethylbenzene         1,3,5-Trimethylbenzene         1,2-Dichloroethane (EDC)         1,2-Dibromoethane (EDB)         Naphthalene         1-Methylnaphthalene	<b>Result</b> 15 6.5 2.5 ND	Re RL Qu 1.0	ceived Dat	<b>:e:</b> 6/2	1/2019 8:18:00 AM	
Analyses EPA METHOD 8260B: VOLATILES Benzene Toluene Ethylbenzene Methyl tert-butyl ether (MTBE) 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene 1,2-Dichloroethane (EDC) 1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene	<b>Result</b> 15 6.5 2.5 ND	<b>RL Q</b>				
EPA METHOD 8260B: VOLATILES Benzene Toluene Ethylbenzene Methyl tert-butyl ether (MTBE) 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene 1,2-Dichloroethane (EDC) 1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene	15 6.5 2.5 ND	1.0	ual Units	DF	Date Analyzed	
Benzene Toluene Ethylbenzene Methyl tert-butyl ether (MTBE) 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene 1,2-Dichloroethane (EDC) 1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene	6.5 2.5 ND					Batch
Toluene Ethylbenzene Methyl tert-butyl ether (MTBE) 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene 1,2-Dichloroethane (EDC) 1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene	6.5 2.5 ND				Analyst:	DJF
Ethylbenzene Methyl tert-butyl ether (MTBE) 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene 1,2-Dichloroethane (EDC) 1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene	2.5 ND	0,10	µg/L	10	6/26/2019 1:36:58 PM	W6097
Methyl tert-butyl ether (MTBE) 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene 1,2-Dichloroethane (EDC) 1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene	ND		µg/L	1	6/26/2019 12:37:56 PM	W6097
Methyl tert-butyl ether (MTBE) 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene 1,2-Dichloroethane (EDC) 1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene		0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097
1,3,5-Trimethylbenzene 1,2-Dichloroethane (EDC) 1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene	0.48	0.10	μg/L	1	6/26/2019 12:37:56 PM	W6097
1,3,5-Trimethylbenzene 1,2-Dichloroethane (EDC) 1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene		0.10	μg/L	1	6/26/2019 12:37:56 PM	W6097
1,2-Dichloroethane (EDC) 1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene	0.83	0.10	μg/L	1	6/26/2019 12:37:56 PM	W6097
1,2-Dibromoethane (EDB) Naphthalene 1-Methylnaphthalene	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	W6097
Naphthalene 1-Methylnaphthalene	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	W6097
1-Methylnaphthalene	ND	0.20	μg/L	1	6/26/2019 12:37:56 PM	
	ND	0.40	μg/L	1	6/26/2019 12:37:56 PM	
	ND	0.40	μg/L	1	6/26/2019 12:37:56 PM	
Acetone	ND	1.0	μg/L	1	6/26/2019 12:37:56 PM	
Bromobenzene	ND	0.10	µ∘9/= µg/L	1	6/26/2019 12:37:56 PM	
Bromodichloromethane	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	
Bromoform	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	
Bromomethane	ND	0.20	µg/L	1	6/26/2019 12:37:56 PM	
2-Butanone	ND	1.0	μg/L	1	6/26/2019 12:37:56 PM	
Carbon disulfide	ND	1.0	μg/L	1	6/26/2019 12:37:56 PM	
Carbon tetrachloride	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	
Chlorobenzene	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	
Chloroethane	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	
Chloroform	ND	0.20	μg/L	1	6/26/2019 12:37:56 PM	
Chloromethane	ND	0.10	µg/∟ µg/L	1	6/26/2019 12:37:56 PM	
2-Chlorotoluene	ND	0.10		1	6/26/2019 12:37:56 PM	
4-Chlorotoluene	ND	0.10	μg/L μg/L	1	6/26/2019 12:37:56 PM	
cis-1,2-DCE	ND	0.10		1	6/26/2019 12:37:56 PM	
	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	
cis-1,3-Dichloropropene	ND		µg/L		6/26/2019 12:37:56 PM	
1,2-Dibromo-3-chloropropane		0.20	μg/L	1		
Dibromochloromethane	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	
Dibromomethane	ND	0.20	μg/L	1	6/26/2019 12:37:56 PM	
1,2-Dichlorobenzene	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	
1,3-Dichlorobenzene	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	
1,4-Dichlorobenzene	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	
Dichlorodifluoromethane	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	
1,1-Dichloroethane	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	
1,1-Dichloroethene	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097
1,2-Dichloropropane	ND	0.10	1. ~ //			
1,3-Dichloropropane 2,2-Dichloropropane	ND	0.10	μg/L μg/L	1 1	6/26/2019 12:37:56 PM 6/26/2019 12:37:56 PM	W6097

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

\* **Qualifiers:** 

- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits Р Sample pH Not In Range
- RL Reporting Limit

Page 1 of 2

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

**Analytical Report** Lab Order 1906B64

Date Reported: 6/28/2019

Hall Environmental Analy	vsis Laboratory, Inc.	Date Reported: 6/28/201
CLIENT: Blagg Engineering		Client Sample ID: SVE (BH-2)
<b>Project:</b> MUDGE A 2		Collection Date: 6/20/2019 11:00:00 AM
Lab ID: 1906B64-001	Matrix: AIR	Received Date: 6/21/2019 8:18:00 AM

200 22 1900 201 001														
Analyses	Result	RL	Qual Units	DF	Batch									
EPA METHOD 8260B: VOLATILES					Analyst	DJF								
1,1-Dichloropropene	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
Hexachlorobutadiene	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	W6097								
2-Hexanone	ND	1.0	μg/L	1	6/26/2019 12:37:56 PM	W6097								
Isopropylbenzene	0.36	0.10	μg/L	1	6/26/2019 12:37:56 PM	W6097								
4-Isopropyltoluene	ND	0.10	μg/L	1	6/26/2019 12:37:56 PM	W6097								
4-Methyl-2-pentanone	ND	1.0	μg/L	1	6/26/2019 12:37:56 PM	W6097								
Methylene chloride	ND	0.30	µg/L	1	6/26/2019 12:37:56 PM	W6097								
n-Butylbenzene	ND	0.30	μg/L	1	6/26/2019 12:37:56 PM	W6097								
n-Propylbenzene	0.24	0.10	μg/L	1	6/26/2019 12:37:56 PM	W6097								
sec-Butylbenzene	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
Styrene	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
tert-Butylbenzene	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
1,1,1,2-Tetrachloroethane	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
1,1,2,2-Tetrachloroethane	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
Tetrachloroethene (PCE)	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
trans-1,2-DCE	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
trans-1,3-Dichloropropene	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
1,2,3-Trichlorobenzene	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
1,2,4-Trichlorobenzene	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
1,1,1-Trichloroethane	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
1,1,2-Trichloroethane	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
Trichloroethene (TCE)	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
Trichlorofluoromethane	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
1,2,3-Trichloropropane	ND	0.20	µg/L	1	6/26/2019 12:37:56 PM	W6097								
Vinyl chloride	ND	0.10	µg/L	1	6/26/2019 12:37:56 PM	W6097								
Xylenes, Total	18	0.15	µg/L	1	6/26/2019 12:37:56 PM	W6097								
Surr: Dibromofluoromethane	73.9	70-130	%Rec	1	6/26/2019 12:37:56 PM	W6097								
Surr: 1,2-Dichloroethane-d4	84.9	70-130	%Rec	1	6/26/2019 12:37:56 PM	W6097								
Surr: Toluene-d8	122	70-130	%Rec	1	6/26/2019 12:37:56 PM	W6097								
Surr: 4-Bromofluorobenzene	99.2	70-130	%Rec	1	6/26/2019 12:37:56 PM	W6097								

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

\* Value exceeds Maximum Contaminant Level.

**Qualifiers:** 

D Sample Diluted Due to Matrix Н

Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

Page 2 of 2

HALL ENVIRONMENTAL ANALYSIS LABORATORY	A TEL: 505-345-39	tal Analysis Labora 4901 Hawkins Ibuquerque, NM 87 75 FAX: 505-345-4 hallenvironmental.	s NE 7109 <b>San</b> 4107	Sample Log-In Check List						
Client Name: BLAGG	Work Order Numb	er: 1906B64		RcptNo:	1					
Received By: Anne Thorne Completed By: Anne Thorne Reviewed By: JUBU-19	6/21/2019 8:18:00 A 6/21/2019 2:36:06 P		Anne A. Anne A.	~						
<ul><li><u>Chain of Custody</u></li><li>1. Is Chain of Custody complete?</li><li>2. How was the sample delivered?</li></ul>		Yes <b>V</b>	No 🗌	Not Present 🗌						
Log In 3. Was an attempt made to cool the samples		Yes	No 🗌	NA 🗹						
<ul><li>4. Were all samples received at a temperatur</li><li>5. Sample(s) in proper container(s)?</li></ul>	e of >0° C to 6.0°C	Yes ∟ Yes ✔	No 🗌	NA 🗹						
<ul><li>6. Sufficient sample volume for indicated test</li><li>7. Are samples (except VOA and ONG) prope</li><li>8. Was preservative added to bottles?</li></ul>		Yes ✔ Yes ✔ Yes □	No 🗌 No 💭 No 🖌	NA						
<ul><li>9. VOA vials have zero headspace?</li><li>10. Were any sample containers received brok</li></ul>	en?	Yes 🗌 Yes 🗌	No 🗌 No 🗹	No VOA Vials  # of preserved bottles checked	-6412 1119					
<ol> <li>Does paperwork match bottle labels? (Note discrepancies on chain of custody)</li> <li>Are matrices correctly identified on Chain of 13. Is it clear what analyses were requested?</li> <li>Were all holding times able to be met? (If no, notify customer for authorization.)</li> </ol>	f Custody?	Yes ✔ Yes ✔ Yes ✔ Yes ✔	No No No	for pH: ( <cor Adjusted? Checked by:</cor 	>12 unless noted)					
<b>Special Handling (if applicable)</b> 15. Was client notified of all discrepancies with	this order?	Yes	No 🗌	NA 🗹						
Person Notified: By Whom: Regarding: Client Instructions:	Date J	🗌 eMail 🔲 Ph	none 🗌 Fax	In Person						

16. Additional remarks:

17. Cooler Information

	AL						Ð	olqm		otico	5 pt. compc bir Bubbles (									
	ANALYSTS LABORATORY										Grab sampl	>			 			 		
			Albuquerque, NM 87109	2		(τ	er - 300.	tew \	0.0	08 -	Chloride (soil								cal	
		www.hallenvironmental.com	NM 8	505-345-4107	st				(∀	0Λ-	imə2) 0728								Contact: Steve Moskal	BPX.
6		ental	ue, N	-345	Request						40V) 80928								teve	from
			nerq	505	s Re						8081 Pestic			 					act: S	d PO
	ANALYSTS	enviro	pudl	Fax	Analysis	(1	<sup>7</sup> OS'⁺Oc	1' <sup>2</sup> 01			D, A) snoinA		 	 					 Cont	ceive
		halle	1		Ana		(5)				РАН (8310 РСКА 8 Ме			 		-		 		ve rec
4		MM/	IS NE	-39		-	(3)				EDB (Metho		 	 		-		 	 врх:	ould
			awkir	5-345							TPH (Metho				 				 Y TO	/e/Sh
No.			4901 Hawkins NE	Tel. 505-345-3975			(оям)				TPH 8015B (								emarks: BILL DIRECTLY TO BPX:	Should receive/Should've received PO from BPX.
			490	Tel			(ʎļuo	seÐ)	Hd.	L + 3	BTEX + MTBI								Remarks: BILL DIR	ould r
							(8120	)8) s,	aM.	L + 3	втех + мтв								Rem BIL	Sho
			#2				KAL	LEZ	No No	4	HEAL NO.	102							Date Time 20/m / 352	Date Time <i>しい</i> /2/1/ク の家/子
Time:	🗌 Rush		MUDGE A			jer:	STEVE MOSKAL	<b>NELSON VELEZ</b>	I Yes	erature: X	Preservative Type	Cool							the l	N. M.
Turn-Around Time:	<ul> <li>✓ Standard</li> </ul>	Project Name:		Project #:		Project Manager:		Sampler:	On Ice:	Sample Temp	Container Type and #	tedlar bag - 1			A		gi.		Received by:	Regeived by
Chain-of-Custody Record	BLAGG ENGR. / BP AMERICA		( 87	BLOOMFIELD, NM 87413	2-1199		Level 4 (Full Validation)				Sample Request ID	SVE (BH - 2)							Iby: In J	me:     Relinquished by:     Received by:     Date     Time     Should receive/Should've received PO from BPX. $9(0 \ M M M M$ $00/21/3$ $00/21/3$ $00/21/3$ Should receive/Should've received PO from BPX.
of-Cus	GG ENGR.		P.O. BOX 87	BLOOMF	(505) 632-1199				□ Other_		Matrix	GAS							Relinquished by:	Relinquished by:
hain-	BLAC		Address:			Fax#:	ackage: lard	tion:	n	Type)	Time	1100							 Time:	Time: 010
U	Client:		Mailing Address:		Phone #:	email or Fax#:	QA/QC Package:	Accreditation:		EDD (Type)	Date	6/20/m							U Date: U Date:	Date: UDDATE: