

Incident ID	
District RP	1RP-5698
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?	_____ 100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 ½-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.

State of New Mexico
Oil Conservation Division

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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: JENNIFER ELROD Title: SR. REGULATORY ANALYST

Signature: *Jennifer Elrod* Date: 04/15/2021

email: JELROD@HOTMAIL.COM Telephone: 817-953-3728

OCD Only

Received by: _____ Date: _____

Incident ID	
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Facility ID	
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Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *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: JENNIFER ELROD Title: SR. REGULATORY ANALYST
Signature: Jennifer Elrod Date: 04/15/2021
email: JELROD@HOTMAIL.COM Telephone: 817-953-3728

OCD Only

Received by: Chad Hensley Date: 06/10/21

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Chad Hensley Date: 06/10/21



2904 W 2nd St.
 Roswell, NM 88201
 voice: 575.624.2420
 fax: 575.624.2421
 www.atkinseng.com

October 10, 2019

#chminis_env_19

NMOCD District 1
 1625 N. French Drive
 Hobbs, New Mexico 88210

SUBJECT: Remediation Closure Report for the MINIS FED COM EAST PAD Release (1RP-5698),
 Lea County, New Mexico

Dear NMOCD District 1,

On behalf of Chisholm Energy Operating (CEO), Atkins Engineering Associates INC. (AEA) has prepared this Remediation Closure Report that describes the remediation of a release of liquids related to oil and gas production activities at the MINIS FED COM EAST PAD. The site is in Unit A, Section 1, Township 21S, Range 32E, Lea County, New Mexico, on Federal land. Figure 1 illustrates the vicinity and site location on an USGS 7.5-minute quadrangle map.

Table 1 summarizes release information and Closure Criteria.

Table 1: Release Information and Closure Criteria			
Name	MINIS FED COM EAST PAD	Company	Chisholm Energy
API Number	30-025-44853	Location	32.521936 -103.624001
Incident Number	1RP-5698		
Estimated Date of Release	09/08/19	Date Reported to NMOCD	9/08/19
Land Owner	BLM	Reported To	NMOCD District I
Source of Release	Equipment failure on Kelly hose caused oil based mud to spray on and around the location.		
Released Volume	10 bbls	Released Material	Oil Based Mud
Recovered Volume	0 bbls	Net Release	10 bbls
NMOCD Closure Criteria	>100 feet to groundwater		
AEA Response Dates	10/20/19		

1.0 Background

On September 8, 2019, a release was discovered at the MINIS 1 FED 3BS 7H caused by equipment failure in the drill rig. The Kelly Hose that failed had a working check valve, and the release volume was estimated by operations staff by calculating the volume of mud in the hose past the check valve. Initial response activities were conducted by the operator, and included source elimination by means of repair and immediate site stabilization and release recovery. Figure 1 illustrates the vicinity and site location. The C-141 forms are included in Appendix A.

2.0 Site Information and Closure Criteria

The MINIS 1 FED 3BS 7H is located approximately 34 miles East of Hobbs Lea County, New Mexico on Federal (BLM) land at an elevation of approximately 3724 feet above mean sea level (amsl).

Based upon the New Mexico Office of the State Engineers (NMOSE) online water well database, (Appendix B), depth to groundwater in the area is estimated to be 102-340 feet below grade surface (bgs). There are no known water sources within ½-mile of the location, according to the NMOSE database. (https://gis.ose.state.nm.us/gisapps/ose_pod_locations/; accessed 4/10/2019). The nearest significant watercourse is unnamed Salt Lake, located approximately 4 miles south of the location. Figure 1 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of greater than 100 feet bgs. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC.

Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

3.0 Release Characterization and Remediation Activities

On October, 8th AEA personnel arrived on site in response to the release associated MINIS 1 FED 3BS 7H. AEA and its contractors performed an application of a permanganate oxidizer to the affected soil and vegetation. Soil samples were field-screened for chloride using an electrical conductivity (EC) meter and found no samples higher than NRCS defined background.

A total of 3 composite sample locations (L1, L2 and L3) were investigated using a hand-auger, to depths up to .5 feet bgs. All samples were collected at each sampling location and field-screened using the method above. A total of 3 samples were collected for laboratory analysis for total chloride using EPA Method 300.0., EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D.

As summarized in Table 3, results indicated that most of the location was remediated successfully by the initial action performed by AEA and its contractors. an area approximately 100 feet wide and 30 feet long remained impacted. The area is located to the west of the pad behind the production tank battery.

The surface soil was treated with oxidizers until field screening results indicated that the NMOCD Closure Criteria would be met or as close to production equipment as could be safely allowed.

Minis Fed Com East Pad Remediation Closure Report (1RP-5698)
February 1, 20219

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On October 20, 2019 AEA began conducting confirmation sampling. The areas around sample locations. The confirmation samples were collected from within the mist area in accordance with a systematic sampling approach as defined by SW846 using Gilbert, 1987 equation 5.2.3 for Stratified Random Sampling which is detailed in Appendix C. This systematic method meets the EPAs data quality assessment standards (DQA) for composite sampling as defined by (Myers 1997) Using Confirmation samples were comprised of five-point composites of the area (L1-L3).

All samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico (Appendix D).

Figure 3 shows the extent of the excavation and sample locations. All laboratory results are summarized in Table 3. Laboratory reports are included in Appendix D.

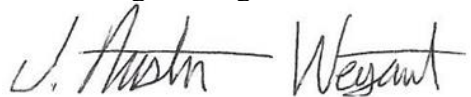
In addition to meeting the Closure Criteria, for the well pad meet the Reclamation requirement of 19.15.29.13(D)(1). Contaminated soils were removed and treated chemically and biologically onsite and as of October 29, 2019 have revegetated with native vegetation.

4.0 Scope and Limitations

The scope of our services included: assessment sampling; verifying release stabilization; regulatory liaison; remediation; and preparing this closure report. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact Austin Weyant at 575-626-3993

Submitted by:
Atkins Engineering Associates INC



Austin Weyant
Geoscientist

ATTACHMENTS:

Figures:

Figure 1: Vicinity and Well Head Protection Map

Figure 2: Surface Water Radius Map

Figure 3: Site and Sample Location Map

Minis Fed Com East Pad Remediation Closure Report (1RP-5698)
February 1, 20219

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Tables:

Table 2: NMOCD Closure Criteria Justification

Table 3a: Summary of Initial Sample Results

Table 3b: Summary of Closure Sample Results

Appendices:

Appendix A: Form C141

Appendix B: NMOSE Wells Report

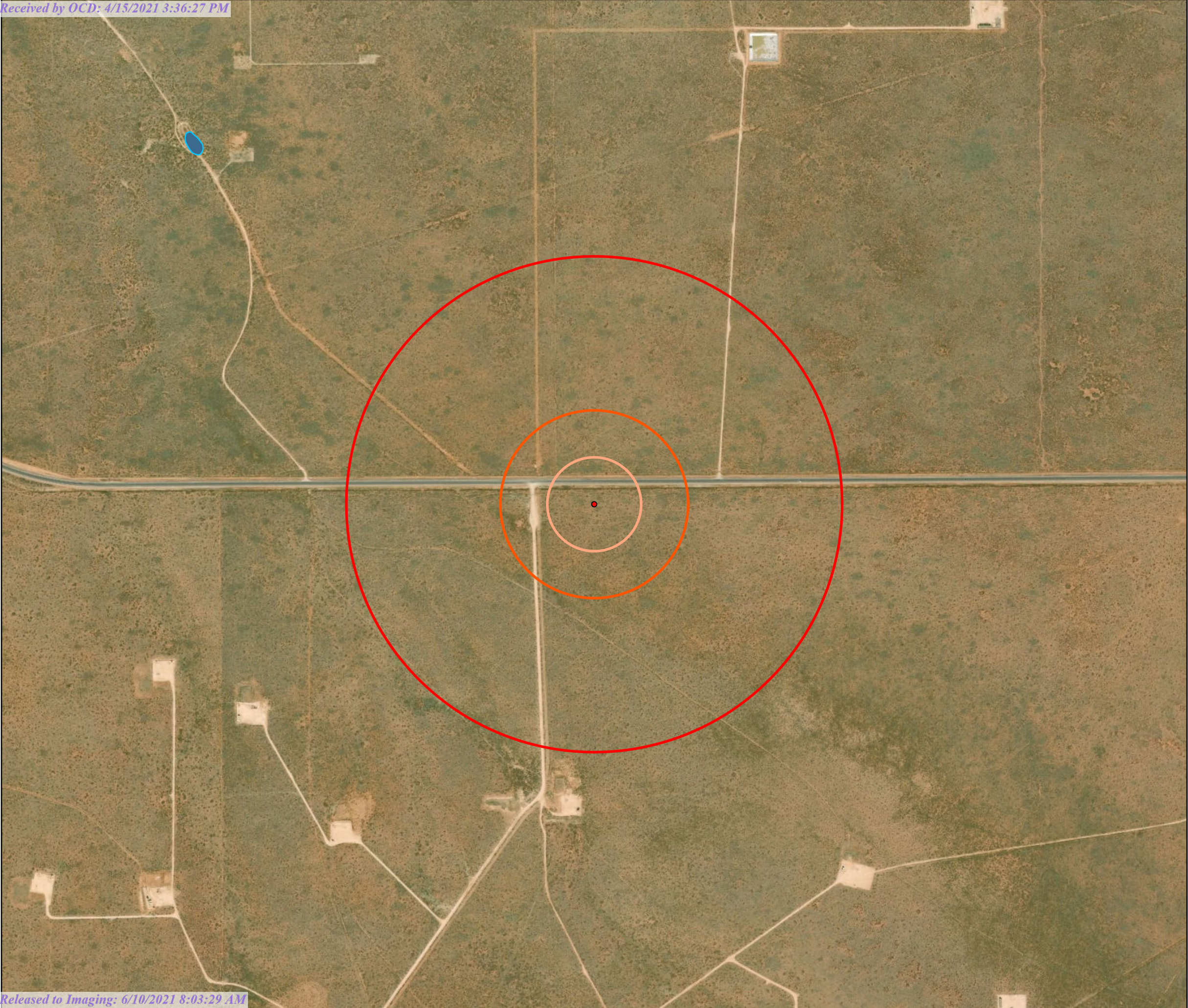
Appendix C: VSP Sampling Protocol

Appendix D: Laboratory Analytical Reports

Appendix E: Open Excavation Photo Log

FIGURES

MINIS 1 FED 3BS 7H
Sec 1, T 21S, R 32E, N.M.P.M
Lea County, New Mexico



- MINIS 1 FED 3BS 7H
- 500 Feet
- 1,000 Feet
- 0.5 Mile
- Springs_Seeps
- Streams_Canals
- Rivers
- Flowlines SENM
- Lakes Playas
- FlowlineSENM 200MBuffer
- FEMA Flood Zones 2011

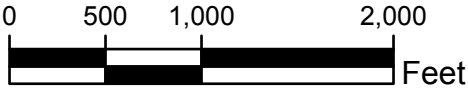
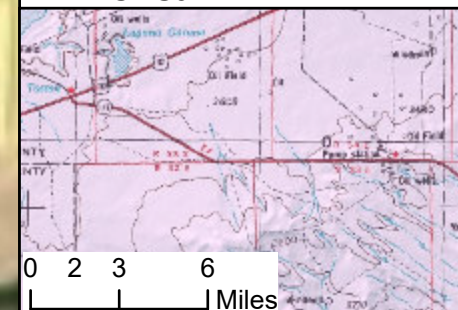




FIGURE 2-
Karst and NMOSE PODs
Minis fed 1



LEGEND

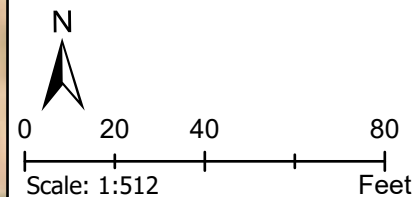
● Point layer

BLM Karst Potential

High

Low

Medium



32.65642° -103.149137°

JOB No. minis>env.19

DATE FIELD: 10/19/2019 DRAWN JAW

DATE DRAWN: 2/1/2021 REVIEW JAW

Atkins
ENGINEERING ASSOCIATES

TABLES

Table 2:
NMOCD Closure CriteriaMINIS FED COM EAST PAD
Chisholm Energy Operating LLC

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)		
Horizontal Distance From All Water Sources Within 1/2 Mile (ft)		
Horizontal Distance to Nearest Significant Watercourse (ft)		

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		Closure Criteria (units in mg/kg)				
		Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene
< 50' BGS		600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'	110	20000	2500	1000	50	10
Surface Water	yes or no	if yes, then				
<300' from continuously flowing watercourse or other significant watercourse?	no	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	no					
Water Well or Water Source						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	no					
<1000' from fresh water well or spring?	no					
Human and Other Areas						
<300' from an occupied permanent residence, school, hospital, institution or church?	no					
within incorporated municipal boundaries or within a defined municipal fresh water well field?	no					
<100' from wetland?	no					
within area overlying a subsurface mine	no					
within an unstable area?	no					
within a 100-year floodplain?	no					

AEA #

Table 3:
Summary of Sample Results

Chisolm Energy
Minis 1 Fed

[illegible]

"--" = Not Analyzed

AEA #

APPENDIX A FORMS C141

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NRM1927034019
District RP	1RP-5698
Facility ID	fAB1907843825
Application ID	pRM1927033528

Release Notification

Responsible Party

Responsible Party	CHISHOLM ENERGY OPERATING, LLC	OGRID	372137
Contact Name	TIM GREEN	Contact Telephone	432-413-9747
Contact email	tgreen@chisholmenergy.com	Incident #	(assigned by OCD)
Contact mailing address	801 CHERRY STREET, SUITE 1200-UNIT 20, FORT WORTH, TX 76102		

Location of Release Source

Latitude 32.521936 Longitude -103.623806
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	MINIS 1 FED COM WCA 16H	Site Type	DRILLING RIG
Date Release Discovered	09/08/2019	API# (if applicable)	30-025-44853

Unit Letter	Section	Township	Range	County
A	1	21S	32E	LEA

Surface Owner: ☒ State ☒ Federal ☐ Tribal ☐ Private (Name: _____)
rlm/9/27/2019

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input checked="" type="checkbox"/> Other (describe)	Volume/Weight Released (provide units) OIL BASED MUD 10 BBLS	Volume/Weight Recovered (provide units)

Cause of Release KELLY HOSE ON DRILLING RIG BLEW CAUSING OIL BASED MUD TO SPRAY ON DRILING RIG, RUN INTO CELLAR, AND SPRAY ON HWY 176 AND ACROSS HWY ONTO STATE LEASE V084210001.

Incident ID	NRM1927034019
District RP	1RP-5698
Facility ID	fAB1907843825
Application ID	pRM1927033528

<p>Was this a major release as defined by 19.15.29.7(A) NMAC?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>If YES, for what reason(s) does the responsible party consider this a major release?</p>
<p>If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?</p> <p>YES, NOTICE WAS GIVEN NEXT MORNING TO RICK RICKMAN @ OCD HOBBS, TO JIM AMOS WITH THE BLM, NMDOT, AND JIM GRISWOLD WITH OCD BY EMAIL.</p>	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
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: <u>JENNIFER ELROD</u>	Title: <u>SR. REGULATORY ANALYST</u>
Signature: <u><i>Jennifer Elrod</i></u>	Date: <u>09/09/2019</u>
email: <u>jelrod@chisholmenergy.com</u>	Telephone: <u>817-953-3728</u>
<u>OCD Only</u>	
Received by: <u>Ramona Marcus</u>	Date: <u>09/27/2019</u>

APPENDIX B

NMOSE WELLS REPORT



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(quarters are smallest to largest)	(NAD83 UTM in meters)		
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00793 POD1	1	1	2	01	21S	32E	628932	3598270*

Driller License: 122	Driller Company: UNKNOWN	
Driller Name: PHILLIPS		
Drill Start Date:	Drill Finish Date: 12/31/1960	Plug Date:
Log File Date:	PCW Rev Date:	Source:
Pump Type:	Pipe Discharge Size:	Estimated Yield:
Casing Size: 8.00	Depth Well: 1000 feet	Depth Water:

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

9/4/19 1:14 PM

POINT OF DIVERSION SUMMARY

APPENDIX C

VSP SAMPLING PROTOCOL

APPENDIX D

LABORATORY ANALYTICAL REPORTS



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

November 01, 2019

Austin Weyant
Atkins Engineering Associates
2904 West Second Street
Roswell, NM 88201
TEL: (575) 624-2420
FAX: (575) 624-2421

RE: MINIS

OrderNo.: 1910E42

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/29/2019 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,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1910E42

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Client Sample ID: L1

Project: MINIS

Collection Date: 10/20/2019

Lab ID: 1910E42-001

Matrix: SOIL

Received Date: 10/29/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	10/31/2019 2:36:10 PM	48509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	10/31/2019 1:22:45 AM	48459
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/31/2019 1:22:45 AM	48459
Surr: DNOP	103	70-130		%Rec	1	10/31/2019 1:22:45 AM	48459
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/30/2019 8:26:08 PM	48446
Surr: BFB	114	77.4-118		%Rec	1	10/30/2019 8:26:08 PM	48446
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/30/2019 8:26:08 PM	48446
Toluene	ND	0.046		mg/Kg	1	10/30/2019 8:26:08 PM	48446
Ethylbenzene	ND	0.046		mg/Kg	1	10/30/2019 8:26:08 PM	48446
Xylenes, Total	ND	0.093		mg/Kg	1	10/30/2019 8:26:08 PM	48446
Surr: 4-Bromofluorobenzene	122	80-120	S	%Rec	1	10/30/2019 8:26:08 PM	48446

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
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Page 1 of 7

Analytical Report

Lab Order 1910E42

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Client Sample ID: L2

Project: MINIS

Collection Date: 10/20/2019

Lab ID: 1910E42-002

Matrix: SOIL

Received Date: 10/29/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	10/31/2019 2:48:30 PM	48509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	10/31/2019 2:06:26 AM	48459
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/31/2019 2:06:26 AM	48459
Surr: DNOP	102	70-130		%Rec	1	10/31/2019 2:06:26 AM	48459
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/30/2019 8:49:30 PM	48446
Surr: BFB	113	77.4-118		%Rec	1	10/30/2019 8:49:30 PM	48446
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/30/2019 8:49:30 PM	48446
Toluene	ND	0.049		mg/Kg	1	10/30/2019 8:49:30 PM	48446
Ethylbenzene	ND	0.049		mg/Kg	1	10/30/2019 8:49:30 PM	48446
Xylenes, Total	ND	0.097		mg/Kg	1	10/30/2019 8:49:30 PM	48446
Surr: 4-Bromofluorobenzene	120	80-120		%Rec	1	10/30/2019 8:49:30 PM	48446

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
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 1910E42

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Client Sample ID: L3

Project: MINIS

Collection Date: 10/20/2019

Lab ID: 1910E42-003

Matrix: SOIL

Received Date: 10/29/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	10/31/2019 3:00:51 PM	48509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/31/2019 2:28:29 AM	48459
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/31/2019 2:28:29 AM	48459
Surr: DNOP	101	70-130		%Rec	1	10/31/2019 2:28:29 AM	48459
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/30/2019 9:12:46 PM	48446
Surr: BFB	98.0	77.4-118		%Rec	1	10/30/2019 9:12:46 PM	48446
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/30/2019 9:12:46 PM	48446
Toluene	ND	0.050		mg/Kg	1	10/30/2019 9:12:46 PM	48446
Ethylbenzene	ND	0.050		mg/Kg	1	10/30/2019 9:12:46 PM	48446
Xylenes, Total	ND	0.099		mg/Kg	1	10/30/2019 9:12:46 PM	48446
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	10/30/2019 9:12:46 PM	48446

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
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910E42****01-Nov-19****Client:** Atkins Engineering Associates**Project:** MINIS

Sample ID: MB-48509	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 48509	RunNo: 64117								
Prep Date: 10/31/2019	Analysis Date: 10/31/2019	SeqNo: 2195081	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-48509	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 48509	RunNo: 64117								
Prep Date: 10/31/2019	Analysis Date: 10/31/2019	SeqNo: 2195082	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	99.7	90	110			

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
PQL Practical Quantitative Limit
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 Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1910E42

01-Nov-19

Client: Atkins Engineering Associates**Project:** MINIS

Sample ID: LCS-48459	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 48459			RunNo: 64089						
Prep Date: 10/29/2019	Analysis Date: 10/30/2019			SeqNo: 2193221		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	93.7	63.9	124			
Surr: DNOP	4.4		5.000		87.0	70	130			

Sample ID: MB-48459	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 48459			RunNo: 64089						
Prep Date: 10/29/2019	Analysis Date: 10/30/2019			SeqNo: 2193223		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	9.3		10.00		93.4	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
PQL Practical Quantitative Limit
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 Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910E42****01-Nov-19****Client:** Atkins Engineering Associates**Project:** MINIS

Sample ID: MB-48446	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 48446	RunNo: 64076								
Prep Date: 10/29/2019	Analysis Date: 10/30/2019	SeqNo: 2193023	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		99.9	77.4	118			

Sample ID: LCS-48446	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 48446	RunNo: 64076								
Prep Date: 10/29/2019	Analysis Date: 10/30/2019	SeqNo: 2193024	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	91.5	80	120			
Surr: BFB	1100		1000		108	77.4	118			

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
PQL Practical Quantitative Limit
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 Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910E42****01-Nov-19****Client:** Atkins Engineering Associates**Project:** MINIS

Sample ID: MB-48446	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 48446		RunNo: 64076							
Prep Date: 10/29/2019	Analysis Date: 10/30/2019		SeqNo: 2193064		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		106	80	120			

Sample ID: LCS-48446	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 48446		RunNo: 64076							
Prep Date: 10/29/2019	Analysis Date: 10/30/2019		SeqNo: 2193181		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	99.2	80	120			
Toluene	1.0	0.050	1.000	0	99.6	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.1	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.7	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Qualifiers:

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

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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: ATK

Work Order Number: 1910E42

RcptNo: 1

Received By: Juan Rojas 10/29/2019 9:15:00 AMCompleted By: Yazmine Garduno 10/29/2019 10:08:46 AMReviewed By: DAD 10/29/19*Yazmine Garduno*Chain of Custody1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐2. How was the sample delivered? CourierLog In3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐5. Sample(s) in proper container(s)? Yes ☒ No ☐6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒10. Were any sample containers received broken? Yes ☐ No ☒11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐13. Is it clear what analyses were requested? Yes ☒ No ☐14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

of preserved
bottles checked
for pH:10/29/19

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)15. Was client notified of all discrepancies with this order? Yes ☒ No ☐ NA ☐Person Notified: Austin WeyantDate: 10/2/2019

By Whom: _____

Via: ☐ eMail ☒ Phone ☐ Fax ☐ In PersonRegarding: Unable to read project name and numberClient Instructions: Per Austin, name Minis, number MINIS ENV 2019

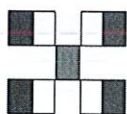
16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good				
2	1.0	Good				
3	0.2	Good				

[illegible]

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



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

Remarks:

Remarks: EMAIL
2.3 to 11 = 2.4
0.9 + 0.5 = 1.4

can

APPENDIX E

OPEN EXCAVATION PHOTO LOG



Minis 1 Photos Sample
Locations L2-L3

District I

1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 24251

CONDITIONS

Operator: CHISHOLM ENERGY OPERATING, LLC 801 Cherry Street Fort Worth, TX 76102	OGRID: 372137
	Action Number: 24251
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	Samples will need to be taken across HW 176. All grab samples were taken west of location. Per description: KELLY HOSE ON DRILLING RIG BLEW CAUSING OIL BASED MUD TO SPRAY ON DRILING RIG, RUN INTO CELLAR, AND SPRAY ON HWY 176 AND ACROSS HWY ONTO STATE LEASE V084210001.	6/10/2021
chensley	Horizontal delineation submitted was incomplete and did not meet the requirements of 19.15.29.11 NMAC.	6/10/2021
chensley	Please include in closure report samples across HW 176, on both side of hw 176.	6/10/2021