

August 1, 2023

New Mexico Oil Conservation Division

New Mexico Energy, Minerals, and Natural Resources Department 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Closure Request

Mesa #002H Water Transfer Line Incident Number NRM1927430793 Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of BTA Oil Producers, LLC (BTA), has prepared this *Closure Request* to document assessment, delineation, and soil sampling activities performed at the Mesa #002H Water Transfer Line (Site). The purpose of the Site assessment, delineation, and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a historical produced water release at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, BTA is submitting this *Closure Request*, describing Site assessment and delineation activities that have occurred and requesting closure for Incident Number NRM1927430793.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 11, Township 26 South, Range 32 East, in Lea County, New Mexico (32.06487°, -103.65306°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On August 4, 2019, a leak on a water transfer line caused the release of approximately 11 barrels (bbls) of produced water into the surrounding pasture area. No free-standing fluids were recovered. BTA reported the release to the New Mexico Oil Conservation Division (NMOCD) and submitted a Release Notification Form C-141 (Form C-141) on September 20, 2019. The release was assigned Incident Number NRM1927430793.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well C-04549-POD 1, located approximately 250 feet southwest of the Site. The groundwater well was drilled during July 2021 to a total depth of 103

BTA Oil Producers, LLC Closure Request Mesa #002H Water Transfer Line

feet bgs, and no groundwater was encountered. All wells used for depth to groundwater determination are presented on Figure 1. The associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a riverine, located approximately 195 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

Benzene: 10 milligrams per kilogram (mg/kg)

Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg

Total petroleum hydrocarbons (TPH): 100 mg/kg

Chloride: 600 mg/kg

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On June 1, 2023, Ensolum personnel were at the Site to complete delineation activities to assess for the absence or presence of impacted soil within the inferred release area. Four assessment soil samples (SS01 through SS04) were collected around the inferred release area at a depth of approximately 0.5 feet bgs. One borehole (BH01) was advanced via hand auger within the inferred release area. The delineation borehole was advanced to a depth of 4 feet bgs. Discrete delineation soil samples were collected from the borehole at depths of 0.5 feet and 4 feet bgs. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Appendix B. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included as Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

Laboratory analytical results for soil samples SS01 through SS04, BH01, and BH01A indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete analytical reports are included as Appendix D.

CLOSURE REQUEST

Delineation activities were conducted at the Site to assess for the presence or absence of impacted soil resulting from the August 4, 2019, release of produced water. Laboratory analytical results for the delineation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria and provided lateral and vertical delineation to the most stringent Table 1 Closure Criteria. Based on the laboratory analytical results, impacted soil was not identified, and no further remediation is required.



BTA Oil Producers, LLC Closure Request Mesa #002H Water Transfer Line

No visible indications of the release were observed. Initial response efforts and natural attenuation have mitigated impacts, if any, at this Site. BTA believes the remedial actions completed are protective of human health, the environment, and groundwater. As such, BTA respectfully requests closure for Incident Number NRM1927430793. Notifications submitted to the NMOCD are included in Appendix E and the final Form C-141 is included in Appendix F.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely, **Ensolum, LLC**

Ronni Hayes Assistant Geologist

Rup Huze

cc: Kelton Beaird, BTA Nathan Sirgo, BTA

Bureau of Land Management

Daniel R. Moir, PG Senior Managing Geologist

Appendices:

Figure 1 Site Receptor Map

Figure 2 Delineation Soil Sample Locations
Table 1 Soil Sample Analytical Results
Appendix A Referenced Well Records
Appendix B Lithologic/Soil Sampling Log

Appendix C Photographic Log

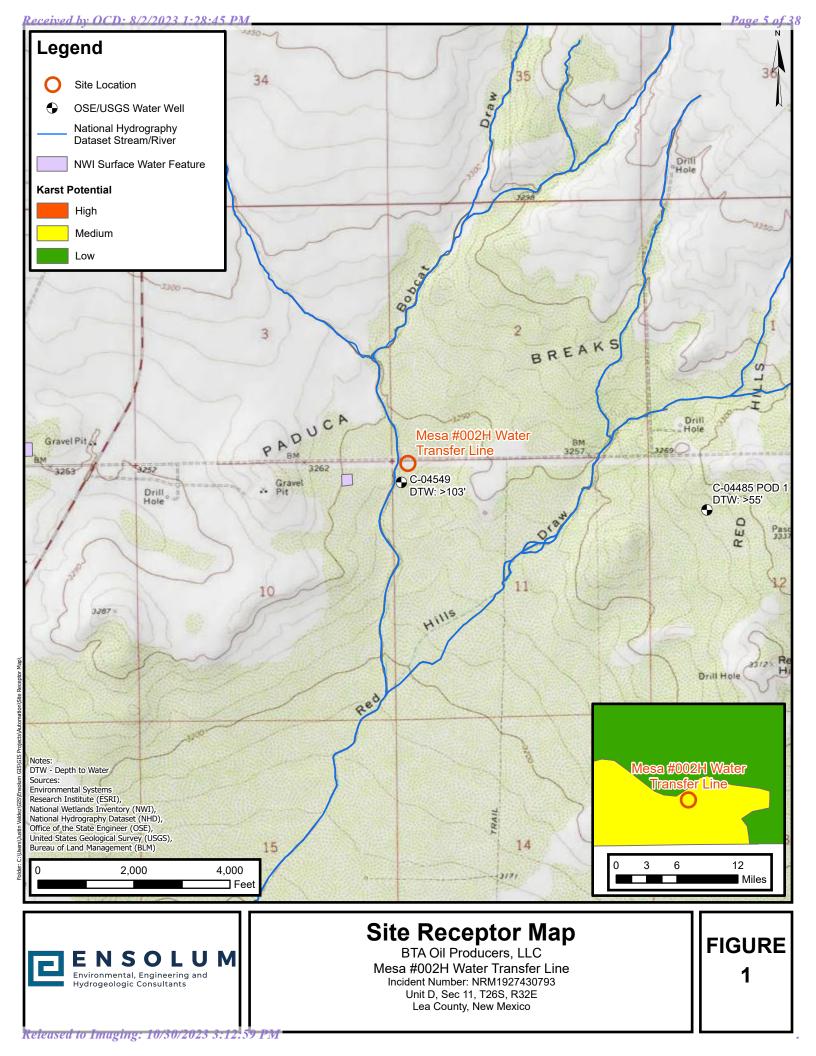
Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation

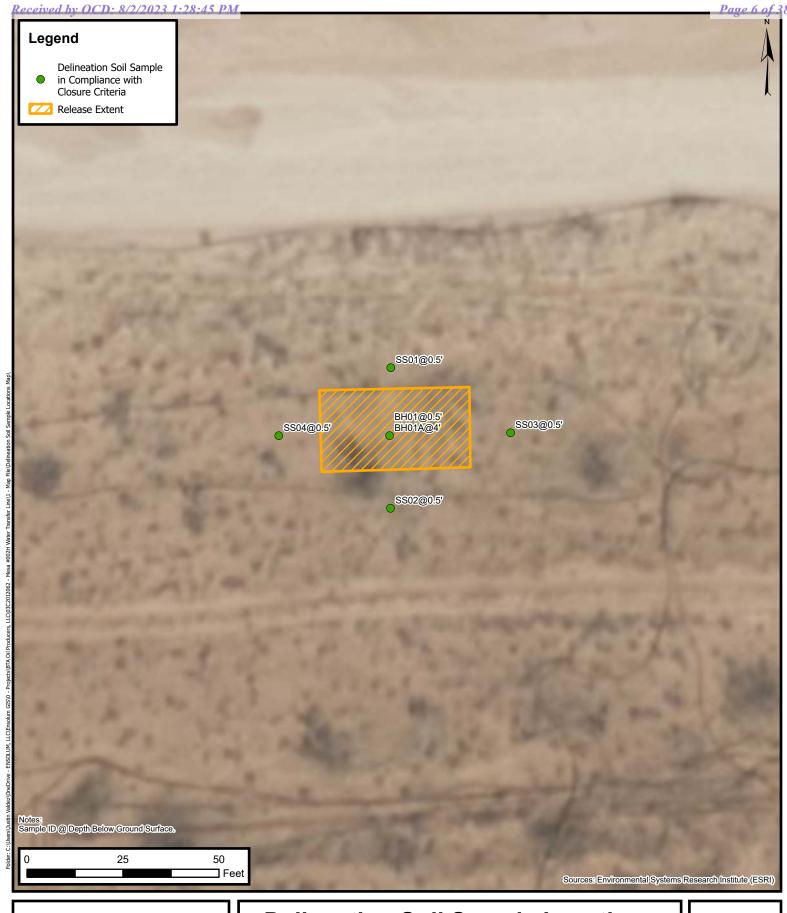
Appendix E NMOCD Notifications

Appendix F Final C-141



FIGURES







Delineation Soil Sample Locations

BTA Oil Producers, LLC
Mesa #002H Water Transfer Line
Incident Number: NRM1927430793
Unit D, Sec 11, T26S, R32E
Lea County, New Mexico

FIGURE 2



TABLES

Page 8 of 38 Received by OCD: 8/2/2023 1:28:45 PM



TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Mesa #002H Water Transfer Line **BTA Oil Producers, LLC Lea County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I CI	osure Criteria (I	NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600
				Delineation	on Soil Sample	Locations				
BH01	06/01/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
BH01A	06/01/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS01	06/01/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS02	06/01/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS03	06/01/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS04	06/01/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0

Notes:

bgs: below ground surface mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

1 of 1 **Ensolum**



APPENDIX A

Referenced Well Records

OSE POD NO. (WELL NO.)

WELL RECORD & LOG OFFICE OF THE STATE ENGINEER www.ose.state.nm.us

WELL TAG ID NO.

OSE FILE NO(S).

OSE DIT AUG 2 2021 PM4:45

N	POD1 (M	TW-1)			n/a			C-4549				
OCATI	WELL OWN	٠,						PHONE (OPTI	ONAL)			
WELL L	WELL OWN 104 S. Pec		ADDRESS					CITY Midland		STATI	79701	ZIP
GENERAL AND WELL LOCATION	WELL LOCATIO	PS)	TITUDE	32 103	MINUTES 4 37	40	0.92 N 3.68 W	1	REQUIRED: ONE TEN	TH OF A	SECOND	
1. GENE	.1	ON RELATIN	NGITUDE NG WELL LOCATION TO 1 T26S R32E					S (SECTION, TO	WNSHJIP, RANGE) WH	ERE AV	AILABLE	
	LICENSE NO		NAME OF LICENSEI	DRILLER	Jackie D. Atkins				NAME OF WELL DRI Atkins Eng		COMPANY g Associates, I	nc.
	DRILLING S 07/14/		DRILLING ENDED 07/14/2021		OMPLETED WELL (For orary well material			LE DEPTH (FT) 103	DEPTH WATER FIR:	ST ENCO		
Z	COMPLETE	D WELL IS:	ARTESIAN	DRY HO	DLE SHALLO	W (UNC	ONFINED)		STATIC WATER LEV	EL IN C		LL (FT)
ATI	DRILLING F	LUID:	☑ AIR	MUD	ADDITIV	ES - SPI	ECIFY:					
RM	DRILLING N	ETHOD:	ROTARY	П намме	R CABLE T	OOL	✓ OTHE	R – SPECIFY:	Hollo	w Ster	m Auger	
INF		(feet bgl)	BORE HOLE	CASINO	MATERIAL ANI	O/OR	CA	ASING	CASING		SING WALL	SLOT
& CASING INFORMATION	FROM	то	DIAM (inches)		GRADE each casing string, esections of screen)		CON	NECTION TYPE ling diameter)	INSIDE DIAM. (inches)	TI	HCKNESS (inches)	SIZE (inches)
8 0	0	103	±8.5		Boring- HSA			_	-			
2. DRILLING			_	 	·							
RIE	-		<u> </u>	 				7 3				-
2. D					7.7						. '/-	
							ļ					
				 	· .							-
	DEPTH	(feet bgl)	BORE HOLE	L	IST ANNULAR SI	EAL M	ATERIAL A	AND	AMOUNT		метно	D OF
I ₹	FROM	то	DIAM. (inches)	GRA	AVEL PACK SIZE	-RANG	E BY INTE	RVAL	(cubic feet)		PLACEM	
ANNULAR MATERIAL												
MA												
LAR				-								_
NA												
3. Al	·			 -						$\neg +$		
FOR	OSE INTER	NAL USE						WR-2	WELL RECORD	& LOG	(Version 06/3	0/17)
-	E NO	45	49		POD NO	D. (TRN	vo. 698	31	8	
LOC	CATION 7	26°	-32E-	<u> </u>	1.1	<u>· _</u>		WELL TAG I	DNO. ΛA	~	PAGE	1 OF 2

OSE DIT AUG 2 2021 PM4:45

	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONE (attach supplemental sheets to fully describe all units)	BS	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	0	4	4	Caliche, Consolidated, White		Y /N	
	4	9	5	Caliche, Consolidated, with fine-grained, Tan		Y ✓N	
	9	14	5	Caliche, Consolidated, White		Y √N	
	14	19	5	Caliche, Consolidated, with fine-grained, Tan		y √n	
	19	69	50	Sand, Fine-grained poorly graded, with caliche, Tanish Brown		Y √N	
ı	69	79	103	Clay, Stiff, High Plasticity, Dark Brown,		Y √N	
VEL						Y N	
4. HYDROGEOLOGIC LOG OF WELL						Y N	
900						Y N	
IC I						Y N	
007						Y N	
EO						Y N	
ROC						Y N	
EXD						Y N	
4.						Y N	
				11		Y N	
						Y N	
						Y N	
						Y N	
						Y N	
						Y N	
	METHOD U	SED TO ES	STIMATE YIELD	OF WATER-BEARING STRATA:	TOTA	AL ESTIMATED	
	PUM	P A	IR LIFT	BAILER OTHER - SPECIFY:	WEL	L YIELD (gpm):	0.00
ISION	WELL TES	TEST STAR	RESULTS - ATT T TIME, END TI	ACH A COPY OF DATA COLLECTED DURING WELL TESTING, IN ME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OV	CLUDII /ER THI	NG DISCHARGE I E TESTING PERIO	METHOD, DD.
TEST; RIG SUPERVIS	MISCELLA	NEOUS IN	FORMATION: _T	emporary well materials removed and the soil boring backfilled us et below ground surface, then hydrated bentonite chips from ten fe	ing drill eet belo	l cuttings from to w ground surface	tal depth to ten to surface.
EST;	DD INIT MA	AE(S) OF D	DILI DIC CIMP	RVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CO	MCTPII	CTION OTTER OF	IANTICENSES
5. T			ron Pruitt, Carm		NSIKU	CHON OTHER IF	ian licensee:
TURE	CORRECT	RECORD O	F THE ABOVE I	FIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL 30 DAYS AFTER COMPLETION OF WELL DRILLING:			
6. SIGNATURE	Jack K	tkins		Jackie D. Atkins		07/29/2021	
		SIGNAT	URE OF DRILLI	ER / PRINT SIGNEE NAME		DATE	
FO	R OSE INTER	NAL LISE		WD-20 W	ELL RE	CORD & LOG (Ve	rsion 06/30/2017)
	E NO.	45	49	POD NO. (TRN NO.	6	18218	
LO	cation 2	68-	30=-	WELL TAG ID NO).	NA	PAGE 2 OF 2



APPENDIX B

Photographic Log



Photographic Log

BTA Oil Producers, LLC Mesa #002H Water Transfer Line Incident Number nRM1927430793





Photograph: 1

Date: 6/1/2023

23 II

Photograph: 2 Date: Description: Delineation activities

Description: Delineation activities

View: Southeast

View: West





Photograph: 3

Date: 6/1/2023

Photograph: 4

Date: 6/1/2023

6/1/2023

Description: Delineation activities

Description: Delineation activities

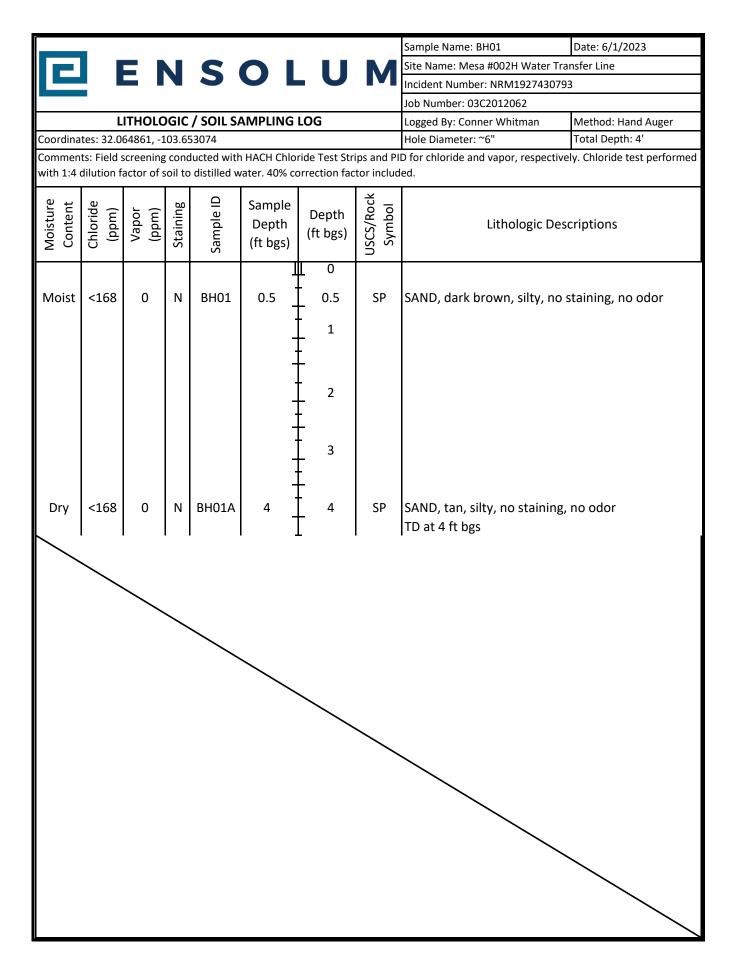
View: Southwest

View: Southeast



APPENDIX C

Lithologic Soil Sampling Log





APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



June 07, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA #002H WATERLINE

Enclosed are the results of analyses for samples received by the laboratory on 06/02/23 8:34.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Celey D. Keene

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY

CARLSBAD NM, 88220

Project: MESA #002H WATERLINE

Project Number: 03C2012062

Project Manager: HADLIE GREEN

Fax To:

Reported: 07-Jun-23 17:36

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 01 .5'	H232787-01	Soil	01-Jun-23 11:55	02-Jun-23 08:34
BH 01A 4'	H232787-02	Soil	01-Jun-23 12:15	02-Jun-23 08:34
SS 01 .5'	H232787-03	Soil	01-Jun-23 12:30	02-Jun-23 08:34
SS 02 .5'	H232787-04	Soil	01-Jun-23 12:35	02-Jun-23 08:34
SS 03 .5'	H232787-05	Soil	01-Jun-23 12:40	02-Jun-23 08:34
SS 04 .5'	H232787-06	Soil	01-Jun-23 12:45	02-Jun-23 08:34

06/07/23 - Client changed the sample ID on -02 (see COC). This is the revised report and will replace the one sent on 06/05/23.

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence aring any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether sur claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keene



Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA #002H WATERLINE

Project Number: 03C2012062

Project Manager: HADLIE GREEN

Fax To:

Reported: 07-Jun-23 17:36

BH 01 .5' H232787-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	3060210	AC	02-Jun-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID))		103 %	71.5	-134	3060208	MS	02-Jun-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctane			93.9 %	48.2	-134	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctadecane			88.1 %	49.1	-148	3060205	MS	02-Jun-23	8015B	

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence aring any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether sur claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene



Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA #002H WATERLINE

Project Number: 03C2012062

Project Manager: HADLIE GREEN

Fax To:

Reported: 07-Jun-23 17:36

BH 01A 4' H232787-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Laborat	ories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	3060210	AC	02-Jun-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID))		102 %	71.5	-134	3060208	MS	02-Jun-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctane			95.9 %	48.2	-134	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctadecane			89.5 %	49.1	-148	3060205	MS	02-Jun-23	8015B	

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence aring any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether sur claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene



Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA #002H WATERLINE

Project Number: 03C2012062 Project Manager: HADLIE GREEN

Fax To:

Reported: 07-Jun-23 17:36

SS 01 .5' H232787-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	3060210	AC	02-Jun-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			103 %	71.5	-134	3060208	MS	02-Jun-23	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctane			95.4 %	48.2	-134	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctadecane			89.3 %	49.1	-148	3060205	MS	02-Jun-23	8015B	

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence aring any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether sur claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keine



Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA #002H WATERLINE

Project Number: 03C2012062

Project Manager: HADLIE GREEN

Reported: 07-Jun-23 17:36

Fax To:

SS 02 .5' H232787-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	3060210	AC	02-Jun-23	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3060208	MS	02-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			103 %	71.5	-134	3060208	MS	02-Jun-23	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctane			96.7 %	48.2	-134	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctadecane			90.8 %	49.1	-148	3060205	MS	02-Jun-23	8015B	

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence aring any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether sur claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene



Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA #002H WATERLINE

Project Number: 03C2012062 Project Manager: HADLIE GREEN

Fax To:

Reported: 07-Jun-23 17:36

SS 03 .5' H232787-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	3060210	AC	02-Jun-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3060219	MS	02-Jun-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3060219	MS	02-Jun-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3060219	MS	02-Jun-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3060219	MS	02-Jun-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3060219	MS	02-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			107 %	71.5	-134	3060219	MS	02-Jun-23	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctane			95.3 %	48.2	-134	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctadecane			89.5 %	49.1	-148	3060205	MS	02-Jun-23	8015B	

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence aring any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether sur claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene



Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA #002H WATERLINE

Project Number: 03C2012062 Project Manager: HADLIE GREEN

Fax To:

Reported: 07-Jun-23 17:36

SS 04 .5' H232787-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	3060213	AC	02-Jun-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3060219	MS	02-Jun-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3060219	MS	02-Jun-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3060219	MS	02-Jun-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3060219	MS	02-Jun-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3060219	MS	02-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)))		105 %	71.5	-134	3060219	MS	02-Jun-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctane			92.4 %	48.2	-134	3060205	MS	02-Jun-23	8015B	
Surrogate: 1-Chlorooctadecane			87.1 %	49.1	-148	3060205	MS	02-Jun-23	8015B	

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence aring any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether sur claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keene

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA #002H WATERLINE

Project Number: 03C2012062 Project Manager: HADLIE GREEN

Fax To:

Reported: 07-Jun-23 17:36

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060210 - 1:4 DI Water		_							_	
Blank (3060210-BLK1)				Prepared &	Analyzed:	02-Jun-23				
Chloride	ND	16.0	mg/kg							
LCS (3060210-BS1)				Prepared &	Analyzed:	02-Jun-23				
Chloride	416	16.0	mg/kg	400	·	104	80-120	·	·	·
LCS Dup (3060210-BSD1)				Prepared &	Analyzed:	02-Jun-23				
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	
Batch 3060213 - 1:4 DI Water										
Blank (3060213-BLK1)				Prepared &	Analyzed:	02-Jun-23				
Chloride	ND	16.0	mg/kg							
LCS (3060213-BS1)				Prepared &	Analyzed:	02-Jun-23				
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (3060213-BSD1)				Prepared &	: Analyzed:	02-Jun-23				
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence aring any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether sur claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keine



%REC

Limits

87.3-122

71.5-134

97.9

RPD

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Analyte

Project: MESA #002H WATERLINE

Project Number: 03C2012062

Project Manager: HADLIE GREEN

Spike

Level

Source

Result

%REC

Fax To:

Reported: 07-Jun-23 17:36

RPD

Limit

Notes

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Units

Reporting

Limit

Result

6.78

0.0490

Blank (3060208-BLK1)				Prepared & Analy	yzed: 02-Jun-23				
Benzene	ND	0.050	mg/kg						
Toluene	ND	0.050	mg/kg						
Ethylbenzene	ND	0.050	mg/kg						
Total Xylenes	ND	0.150	mg/kg						
Total BTEX	ND	0.300	mg/kg						
Surrogate: 4-Bromofluorobenzene (PID)	0.0515		mg/kg	0.0500	103	71.5-134			
LCS (3060208-BS1)				Prepared & Analy	yzed: 02-Jun-23				
Benzene	2.27	0.050	mg/kg	2.00	114	81.4-118			
Toluene	2.25	0.050	mg/kg	2.00	113	88.7-121			
Ethylbenzene	2.19	0.050	mg/kg	2.00	109	86.1-120			
m,p-Xylene	4.51	0.100	mg/kg	4.00	113	88.2-124			
o-Xylene	2.15	0.050	mg/kg	2.00	107	84.9-118			
Total Xylenes	6.66	0.150	mg/kg	6.00	111	87.3-122			
Surrogate: 4-Bromofluorobenzene (PID)	0.0488		mg/kg	0.0500	97.6	71.5-134			
LCS Dup (3060208-BSD1)				Prepared & Analy	yzed: 02-Jun-23				
Benzene	2.32	0.050	mg/kg	2.00	116	81.4-118	2.04	15.8	
Toluene	2.29	0.050	mg/kg	2.00	115	88.7-121	1.84	15.9	
Ethylbenzene	2.23	0.050	mg/kg	2.00	112	86.1-120	2.00	16	
m,p-Xylene	4.60	0.100	mg/kg	4.00	115	88.2-124	1.83	16.2	
o-Xylene	2.18	0.050	mg/kg	2.00	109	84.9-118	1.42	16.7	

Batch 3060219 - Volatiles

Surrogate: 4-Bromofluorobenzene (PID)

Total Xylenes

Blank (3060219-BLK1)		Prepared & Analyzed: 02-Jun-23	
Benzene	ND	0.050 mg/kg	
Toluene	ND	0.050 mg/kg	
Ethylbenzene	ND	0.050 mg/kg	
Total Xylenes	ND	0.150 mg/kg	

mg/kg

mg/kg

6.00

0.0500

0.150

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence are any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether succession are only of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



%REC

Limits

RPD

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Analyte

o-Xylene

Total Xylenes

Surrogate: 4-Bromofluorobenzene (PID)

Project: MESA #002H WATERLINE

Project Number: 03C2012062

Project Manager: HADLIE GREEN

Spike

Level

2.00

6.00

0.0500

Source

Result

%REC

124

126

106

84.9-118

87.3-122

71.5-134

2.63

16.7

16.3

BS-3

BS-3

Fax To:

Reported: 07-Jun-23 17:36

RPD

Limit

Notes

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Units

Reporting

Limit

0.050

0.150

Result

2.49

7.58

0.0528

Blank (3060219-BLK1)				Prepared & Analy	yzed: 02-Jun-23				
Total BTEX	ND	0.300	mg/kg						
Surrogate: 4-Bromofluorobenzene (PID)	0.0520		mg/kg	0.0500	104	71.5-134			
LCS (3060219-BS1)				Prepared & Analy	yzed: 02-Jun-23				
Benzene	2.19	0.050	mg/kg	2.00	109	81.4-118			
Toluene	2.26	0.050	mg/kg	2.00	113	88.7-121			
Ethylbenzene	2.49	0.050	mg/kg	2.00	124	86.1-120			BS-3
m,p-Xylene	4.87	0.100	mg/kg	4.00	122	88.2-124			
o-Xylene	2.42	0.050	mg/kg	2.00	121	84.9-118			BS-3
Total Xylenes	7.45	0.150	mg/kg	6.00	124	87.3-122			BS-3
Surrogate: 4-Bromofluorobenzene (PID)	0.0527		mg/kg	0.0500	105	71.5-134			
LCS Dup (3060219-BSD1)				Prepared & Analy	yzed: 02-Jun-23				
Benzene	2.29	0.050	mg/kg	2.00	114	81.4-118	4.37	15.8	
Toluene	2.42	0.050	mg/kg	2.00	121	88.7-121	6.78	15.9	
Ethylbenzene	2.52	0.050	mg/kg	2.00	126	86.1-120	1.28	16	BS-3
m,p-Xylene	5.09	0.100	mg/kg	4.00	127	88.2-124	4.34	16.2	BS-3

mg/kg

mg/kg

mg/kg

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence are any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether succession are only of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keine



%REC

Limits

RPD

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Analyte

Surrogate: 1-Chlorooctadecane

Project: MESA #002H WATERLINE

Project Number: 03C2012062

Spike

Level

50.0

Source

Result

%REC

85.4

49.1-148

Project Manager: HADLIE GREEN

Fax To:

Reported: 07-Jun-23 17:36

RPD

Limit

Notes

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Units

Reporting

Limit

Result

42.7

,									
Batch 3060205 - General Prep - Organics									
Blank (3060205-BLK1)				Prepared & A	nalyzed: 02-Jun-23	i			
GRO C6-C10	ND	10.0	mg/kg						
DRO >C10-C28	ND	10.0	mg/kg						
EXT DRO >C28-C36	ND	10.0	mg/kg						
Surrogate: 1-Chlorooctane	42.0		mg/kg	49.6	84.8	48.2-134			
Surrogate: 1-Chlorooctadecane	39.8		mg/kg	50.0	79.7	49.1-148			
LCS (3060205-BS1)				Prepared & A	nalyzed: 02-Jun-23	i			
GRO C6-C10	194	10.0	mg/kg	200	96.9	78.5-124			
DRO >C10-C28	179	10.0	mg/kg	200	89.5	72.5-126			
Total TPH C6-C28	373	10.0	mg/kg	400	93.2	77.6-123			
Surrogate: 1-Chlorooctane	49.6		mg/kg	49.6	100	48.2-134			
Surrogate: 1-Chlorooctadecane	44.7		mg/kg	50.0	89.4	49.1-148			
LCS Dup (3060205-BSD1)				Prepared & A	nalyzed: 02-Jun-23	i			
GRO C6-C10	187	10.0	mg/kg	200	93.6	78.5-124	3.49	17.7	
DRO >C10-C28	172	10.0	mg/kg	200	86.0	72.5-126	3.98	21	
Total TPH C6-C28	359	10.0	mg/kg	400	89.8	77.6-123	3.72	18.5	
Surrogate: 1-Chlorooctane	47.4		mg/kg	49.6	95.6	48.2-134			

mg/kg

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence are any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether succession are only of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene



Notes and Definitions

BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence aring any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether sur claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Page 13 of 14

Released to Imaging: 10/30/2023 3:12:59 PM



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

	e: Ensolum, LLC								BI	ILL TO		1			Al	NALYSI	RE	QUES	T		
Project Manage	or: Hadlic Gan	-40					P.0	0. #:	STATE OF THE PARTY.			T			T	T			T	T	T
Address: 317	12 National	Porks Hw	v				Co	mpa	my:	BTA		1									
city: Carl	ibard	State: N/	Zip:	8822	20					Iton E	Penied	1			1.						
Phone #: 432	2-557-8895	Fax #:					Ad	dres	s: 10	45 Pe	cos St	1							- 1		
	C2012062		er:				Cit	v: /	1110	bru	23 01,	1			1				- 1		
Project Name:	Mcsa #002H	Water	inc							Zip: 79	701	1									
Project Locatio								one													
Sampler Name:	Conner W	Amon					Fax					1									
FOR LAB USE ONLY			TI	L	MA	TRIX		PRE	SERV.	SAM	PLING	1									
Lab I.D. H232787	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP	GROUNDWATER	WASTEWATER	OIL	OTHER:	ACID/BASE:	OTHER:	DATE	TIME	TPH	BTEX	Chloride							
1	BHOI	,5'	16		/			1		6/1/23	11:55	i			T						T
2	BHOLA	X 4'	G		1					1	12:15										1
3	5501		-		/				4		12:30										
4	5502	15	G	1	K		Ш	1			121.35										
<u> </u>	\$503	.5	G	1	1		Н	1			12:40	Ш			_						
6	5504	.5	G	4	-/	-	Н	-	1	1	12:45										
			11		-		\sqcup	-	1				_		_		_				
			H		-		H	4	\perp		~ /	\vdash			_	\perp		-			
			\blacksquare		-	-	\Box		\Box		CW_									-	+
		ent's explasive remedy for								1					1		- 1				

Relinquished By:		eceived By:	Verbal Result:	Yes 🗆 No Add	T Phone #:	
Cath	6/1/23	100 1	All Results are emaile	d. Please provide E	mail address:	
Comm	Time: 2'00pm	TWOM	Harespara	solum.com		
Relinquished By:/		eceived By:	DEMARKS.			
Juliu	Time: 34	Spodizion	vell + Cus	tomes reg	nestrel	Sauple change
Delivered By: (Circle One)	Observed Temp. "C	Sample Condition	CHECKED BY: Turnaround Time:	Standard 🗵	Bacteria (only)	Sample Condition
Sampler - UPS - Bus - Other:	Corrected Temp. C.	Cool Intact	(Initials) Thermometer ID #113	Rush [Cool Intact	Observed Temp. °C
FURWI-000 R 3:2 10/07/21		□ No □ No □	Gerrantian Factor -0.5°C		□ No □ No	Corrected Temp. °C



APPENDIX E

NMOCD Notifications



APPENDIX F

Final C-141

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	NRM1927430793
District RP	1RP-5717
Facility ID	
Application ID	pRM1927431182

Release Notification

Responsible Party

Responsible Party: BTA Oil Producers, LLC	OGRID: 260297
Contact Name: Bob Hall	Contact Telephone: 432-682-3753
Contact email: bhall@btaoil.com	Incident # (assigned by OCD)
Contact mailing address: 104 S. Pecos St., Midland, TX	79701

Location of Release Source

Latitude: 32.06487° Longitude: -103.65306°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Mesa #002H Water Transfer Line	Site Type: Pipeline
Date Release Discovered: 8/4/2019	API# (if applicable) Nearest well: Mesa 8105 JVP #002H API #30-025-41289

Unit Letter	Section	Township	Range	County
D	11	26S	32E	Lea

Surface Owner:	☐ State	X Federal		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) 11 BBL	Volume Recovered (bbls) 0 BBL
_	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	⊠ Yes □ No
Condensate	Volume Released (bbls)	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		

A leak was reported to the pumper in the field. The HDPE water transfer line was leaking. It appeared that the line had been ran over by a vehicle and caused a leak.

A 30' x 10' area was soaked by produced water, no fluid recovered. 30' x 10' x 10" deep, 25% porosity

State of New Mexico
Oil Conservation Division

Page 2	2
--------	---

 Incident ID
 NRM1927430793

 District RP
 1RP-5717

 Facility ID
 pRM1927431182

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 p	party must undertake the following actions immediately unless they could create a safety hazard that would result in injury
☐ The source of the rele	ase has been stopped.
☐ The impacted area has	s been secured to protect human health and the environment.
Released materials ha	ve been contained via the use of berms or dikes, absorbent pads, or other containment devices.
All free liquids and re	coverable materials have been removed and managed appropriately.
If all the actions described	above have not been undertaken, explain why:
Field work has alrea	dy started with delineation and excavation of the spill completed.
has begun, please attach a	AC the responsible party may commence remediation immediately after discovery of a release. If remediation narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred t area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
regulations all operators are a public health or the environm failed to adequately investiga	mation given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and required to report and/or file certain release notifications and perform corrective actions for releases which may endanger them. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have the and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws
Printed Name: Bob Hal	Title: Environmental Manager
Signature: Follow	Date: 9/20/2019
email: bhall@btaoil.c	om Telephone: 432-682-3753
OCD Only	
Received by: Ramona	Marcus Date: 10/01/2019

	Page 35 of	38
Incident ID	NRM1927430793	
District RP	1RP-5717	
Facility ID		
Application ID	pRM1927431182	

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?	<u>>100</u> (ft bgs)	
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?		
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?		
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?		
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?		
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?		
Are the lateral extents of the release within a 100-year floodplain?		
Did the release impact areas not 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 vercontamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	rtical extents of soil	
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 well 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 	ls.	
Topographic/Aerial maps		

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.

Laboratory data including chain of custody

Received by OCD: 8/2/2023 1:28:45 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

	Page 36 of 38
Incident ID	NRM1927430793
District RP	1RP-5717
Facility ID	
Application ID	pRM1927431182

Page 37 of 38

Incident ID	NRM1927430793
District RP	1RP-5717
Facility ID	
Application ID	pRM1927431182

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.

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.

A scaled site and sampling diagram as described in 19.15.29.11 NMAC			
Photographs of the remediated site prior to backfill or photomust be notified 2 days prior to liner inspection)	s of the liner integrity if applicable (Note: appropriate OCD District office		
☐ Laboratory analyses of final sampling (Note: appropriate OE	OC District office must be notified 2 days prior to final sampling)		
Description of remediation activities			
and regulations all operators are required to report and/or file certa may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rehuman health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regulated restore, reclaim, and re-vegetate the impacted surface area to the of accordance with 19.15.29.13 NMAC including notification to the Printed Name: _Kelton Beaird	lations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in OCD when reclamation and re-vegetation are complete. _ Title: _ Environmental Manager		
OCD Only			
Received by: Shelly Wells	Date: _8/2/2023		
	y of liability should their operations have failed to adequately investigate and e water, human health, or the environment nor does not relieve the responsible d/or regulations.		
Closure Approved by: Nelson Velez	Date:10/30/2023		
Printed Name:Nelson Velez	Environmental Specialist - Adv		

Operator did not meet 19.15.29.12D (1a) NMAC. Forbearance given on 09/27/2023. Release resolved.

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

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 247143

CONDITIONS

Operator:	OGRID:
BTA OIL PRODUCERS, LLC	260297
104 S Pecos	Action Number:
Midland, TX 79701	247143
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created	Condition	Condition Date
Ву		
nvelez	Operator did not meet 19.15.29.12D (1a) NMAC. Forbearance given on 09/27/2023. Release resolved.	10/30/2023