

April 15, 2024

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 B #25 Incident Number nAPP2112744758 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, excavation, and soil sampling activities performed at Mesa B #25 (Site). The purpose of the Site activities was to assess for the presence or absence of impacts to soil resulting from a historical release of produced water at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, BTA is submitting this *Closure Report*, describing Site assessment, excavation, and soil sampling activities that have occurred and requesting closure for Incident Number nAPP2112744758.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 7, Township 26 South, Range 33 East, in Lea County, New Mexico (32.06395°, -103.604785°) and is associated with oil and gas exploration and production operations on private land owned by AE&J Royalties, LLC.

On March 31, 2021, a valve and choke washed out on a sand trap, resulting in the tank to overflow and release approximately 90 barrels (bbls) of produced water onto the surface of the pad. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 74 bbls of produced water were recovered. BTA reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on May 7, 2021. The release was assigned Incident Number nAPP2112744758.

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 are summarized below and detailed in the NMOCD permitting portal Form C-141 Site Characterization section. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be between 51 feet to 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 04547 POD 1, located just over a half mile south of the Site. The groundwater well has a reported depth to groundwater of 89.5 feet bgs and a total depth of 112 feet bgs. An additional 4 wells located in all cardinal directions, within

BTA Oil Producers, LLC Closure Request Mesa B #25

a 3-mile radius, from the Site indicate depth to groundwater is greater than 55 feet bgs. Of those, three wells confirm depth to groundwater is greater than 100 feet bgs. As such, BTA submitted a Closure Criteria Variance Request on December 5, 2023 and included the nearby groundwater data. The NMOCD approved the Closure Criteria Variance on December 6, 2023. All wells used for depth to groundwater determination are depicted on Figure 1. The associated well records and Closure Criteria Variance Correspondence are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent stream, located approximately 1,145 feet east 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 and the approved Closure Criteria Variance, 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)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between May 2, 2023, and January 30, 2024, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Nineteen assessment soil samples (SS01 through SS19) were collected within and around the release at depths ranging from 0.25 feet to 4 feet bgs, to assess for the presence or absence of impacted soil resulting from the release. 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. Photographic documentation was completed during the Site visits and a photographic log is included as Appendix B. Field screening results and observations for the assessment soil samples were logged on lithologic/soil sampling logs, which are included in Appendix C. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

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- GRO, TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method SM4500.

Laboratory analytical results for assessment soil samples SS01 through SS03, SS05, and SS06 indicated TPH concentrations exceeded the Site Closure Criteria at the ground surface. Laboratory analytical results for assessment soil samples SS07 through SS19 indicated all COC concentrations were complaint with the Site Closure Criteria. Excavation activities were warranted to address the elevated TPH concentrations.



BTA Oil Producers, LLC Closure Request Mesa B #25

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between July 17, 2023, and February 16, 2024, Ensolum personnel were at the Site to oversee excavation activities based on laboratory analytical results for soil samples SS01 through SS03, SS05, and SS06. Excavation activities were performed utilizing a hydrovac and back-hoe. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed to depths ranging from 1-foot to 2 feet bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewall of the excavation extents. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil samples FS01 through FS29 were collected from the floor of the excavation at depths ranging from 1-foot to 2 feet bgs. Confirmation soil samples SW 1 through SW 6 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 2 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above.

Laboratory analytical results for the excavation soil samples FS01 through FS29, and SW 1 through SW 5 indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for soil sample SW 6 indicated the chloride concentration exceeded the most stringent Table I Closure Criteria. Additional soil was removed in the vicinity of SW 6 and subsequent soil sample SW 7 was collected from the sidewall of the excavation at depths ranging from the ground surface to 1-foot bgs. Laboratory analytical results for soil sample SW 7 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. The excavation extent and excavation soil sample locations are presented on Figure 3. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix D.

The excavation area measured approximately 5,585 square feet. A total of approximately 400 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the Lea Land, LLC in Carlsbad, New Mexico.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to assess for the presence or absence of impacted soil resulting from the March 2021 release of produced water. Excavation soil samples collected from the final excavation extent indicated all COC concentrations were compliant with the Site Closure Criteria. Based on the soil sample analytical results, no further remediation was required.

Excavation of impacted soil has mitigated impacts 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 nAPP2112744758. Notifications submitted to the NMOCD are included in Appendix E.



BTA Oil Producers, LLC Closure Request Mesa B #25

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

Sincerely, Ensolum, LLC

Madrie Dreen

Hadlie Green Project Geologist

cc: Ray Ramos, BTA Kelton Beaird, BTA AE&J Royalties, LLC

Daniel R. Moir, PG Senior Managing Geologist

Appendices:

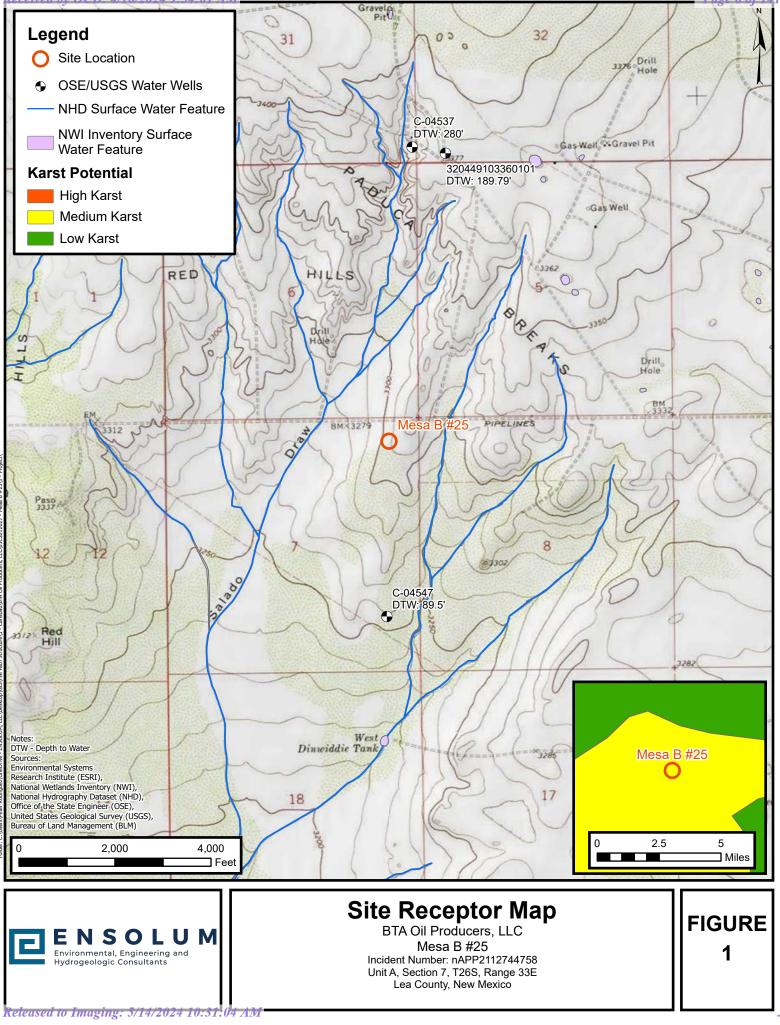
- Figure 1 Site Receptor Map
- Figure 2 Assessment Soil Sample Locations
- Figure 3 Excavation Soil Sample Locations
- Table 1Soil Sample Analytical Results
- Appendix A Referenced Well Records and Closure Criteria Variance Approval
- Appendix B Photographic Log
- Appendix C Lithologic/Soil Sampling Logs
- Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation
- Appendix E NMOCD Notifications



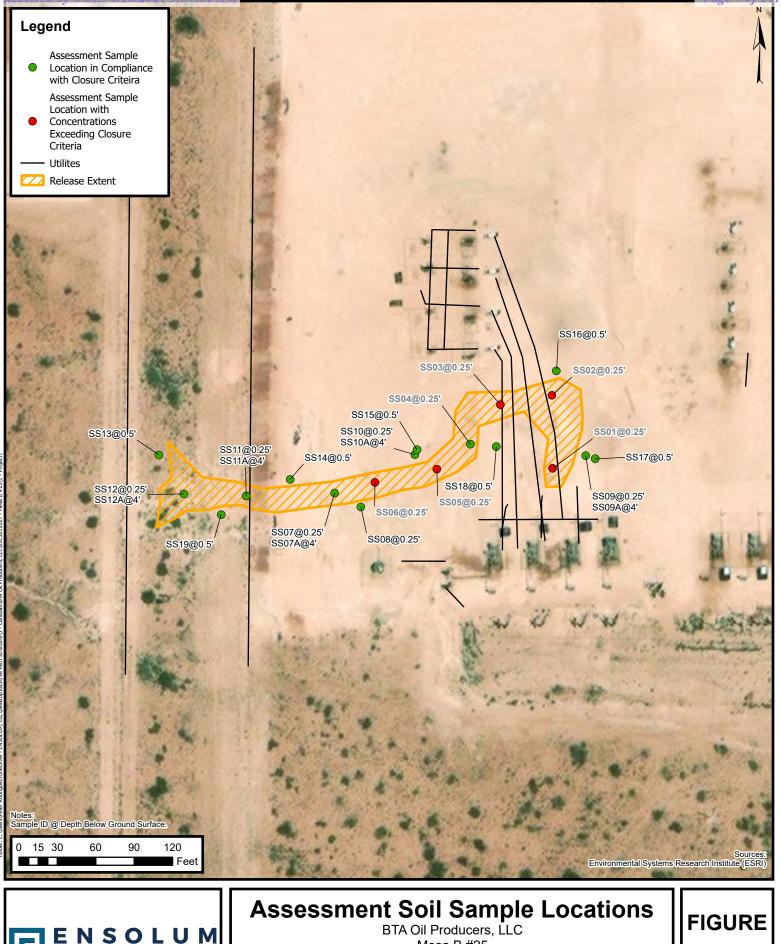
FIGURES



Page 6 of 141



2

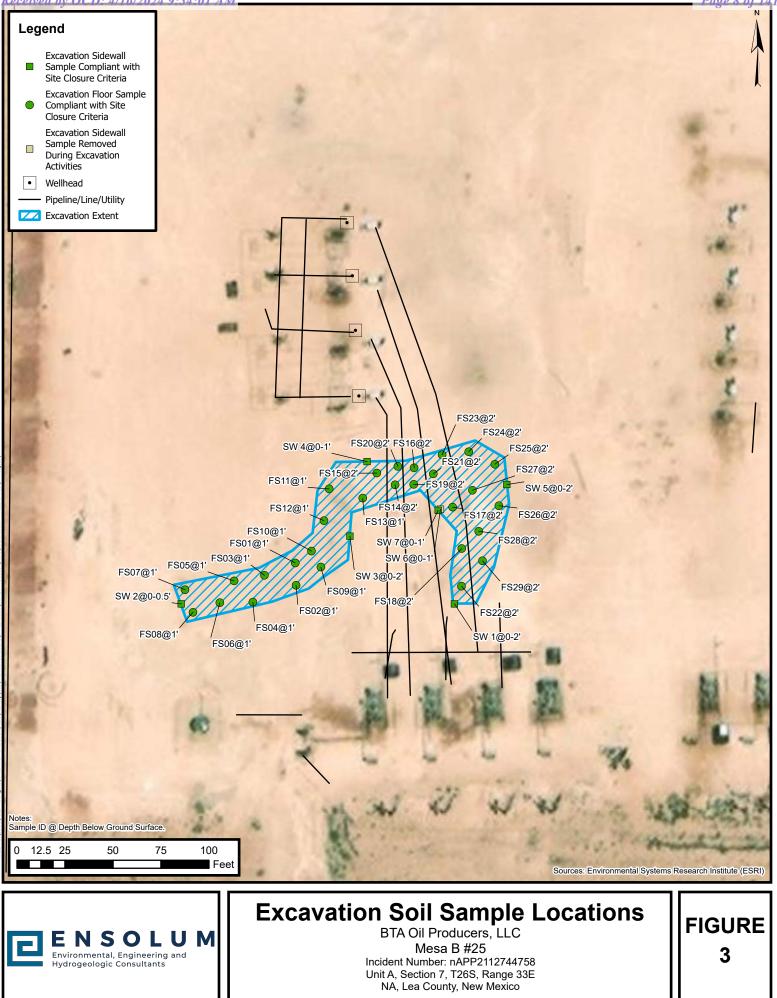


BTA Oil Producers, LLC Mesa B #25 Incident Number: nAPP2112744758 Unit A, Section 7, T26S, Range 33E Lea County, New Mexico

Released to Imaging: 5/14/2024 10:31:04 AM

Environmental, Engineering and Hydrogeologic Consultants

Received by OCD: 4/16/2024 9:54:01 AM



Released to Imaging: 5/14/2024 10:31:04 AM



TABLES

.

P	Ξ	Ν	S	0	L	U	M
---	---	---	---	---	---	---	---

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Mesa B #25 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 C	Closure Criteria ((NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
				Asse	ssment Soil Sa	mples				
SS01	05/02/2023	0.25	<0.050	<0.300	<100	12,100	5,640	12,100	17,740	240
SS02	05/02/2023	0.25	< 0.050	< 0.300	<100	30,100	14,100	30,100	44,200	448
SS03	05/02/2023	0.25	< 0.050	<0.300	<10.0	3,450	4,280	3,450	7,730	848
SS04	05/02/2023	0.25	<0.050	<0.300	<10.0	547	1,670	547	2,217	208
SS05	05/02/2023	0.25	<0.050	<0.300	<10.0	7,230	3,120	7,230	10,350	8,260
SS06	05/02/2023	0.25	<0.050	<0.300	<10.0	1,230	2,970	1,230	4,200	320
SS07	05/02/2023	0.25	<0.050	<0.300	<10.0	226	109	226	335	80.0
SS07A	07/17/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS08	05/02/2023	0.25	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS09	05/02/2023	0.25	<0.050	<0.300	<10.0	881	399	881	1,280	80.0
SS09A	07/17/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SS10	05/02/2023	0.25	<0.050	<0.300	<10.0	474	202	474	676	128
SS10A	07/17/2023	4	<0.050	<0.300	<10.0	16.4	<10.0	16.4	16.4	176
SS11	07/17/2023	0.25	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS11A	07/17/2023	4	<0.050	<0.300	<10.0	31.6	12.0	31.6	43.6	32.0
SS12	07/17/2023	0.25	<0.050	<0.300	<10.0	19.1	<10.0	19.1	19.1	48.0
SS12A	07/17/2023	4	<0.050	<0.300	<10.0	27.2	<10.0	27.2	27.2	32.0
SS13	01/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS14	02/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
SS15	01/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	480
SS16	02/16/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SS17	01/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
SS18	01/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
SS19	01/30/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0

2	Ε	Ν	S	0	L	U	Μ
---	---	---	---	---	---	---	---

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Mesa B #25 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	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
	Date	(leet bys)	(119/Kg)	(ilig/kg)	(mg/kg)	(ilig/kg)	(iiig/kg)	(ilig/kg)	(ing/kg)	(ilig/kg)
NMOCD Table I C	losure Criteria (NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
				Excava	tion Floor Soil	Samples			•	
FS01	07/17/2023	1	<0.050	<0.300	<10.0	91.8	61.6	91.8	153	544
FS02	07/17/2023	1	<0.050	<0.300	<10.0	34.5	13.9	34.5	48.4	1,410
FS03	07/17/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	560
FS04	07/17/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	608
FS05	07/17/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	544
FS06	07/17/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,460
FS07	07/17/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	656
FS08	07/17/2023	1	<0.050	<0.300	<10.0	<10.0	11.1	<10.0	11.1	16.0
FS09	01/30/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	592
FS10	01/30/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
FS11	01/30/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,280
FS12	01/16/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	432
FS13	01/30/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,520
FS14	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	496
FS15	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	496
FS16	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
FS17	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
FS18	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS19	01/16/2024	2	<0.050	<0.300	<10.0	284	418	284	702	416
FS20	01/16/2021	2	<0.050	<0.300	<10.0	158	168	158	326	544
FS21	01/16/2024	2	<0.050	<0.300	<10.0	242	339	242	581	2,960
FS22	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
FS23	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272
FS24	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS25	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	752
FS26	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	656
FS27	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS28	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS29	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192

🖻 ENSOLUM

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Mesa B #25 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 (NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
				Excavati	on Sidewall So	il Samples	•	•		•
SW 1	01/16/2024	0 - 2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	400
SW 2	01/30/2024	0 - 0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	480
SW 3	02/16/2024	0 - 2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SW 4	01/30/2024	0 - 1	<0.050	<0.300	<10.0	43.7	<10.0	43.7	43.7	560
SW 5	02/16/2024	0 - 2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272
SW 6	01/30/2024	0 - 1	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	784
SW 7	02/16/2024	0 - 1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics DRO: Diesel Range Organics ORO: Oil Range Organics TPH: Total Petroleum Hydrocarbon Grey text indicates sample has been excavated.

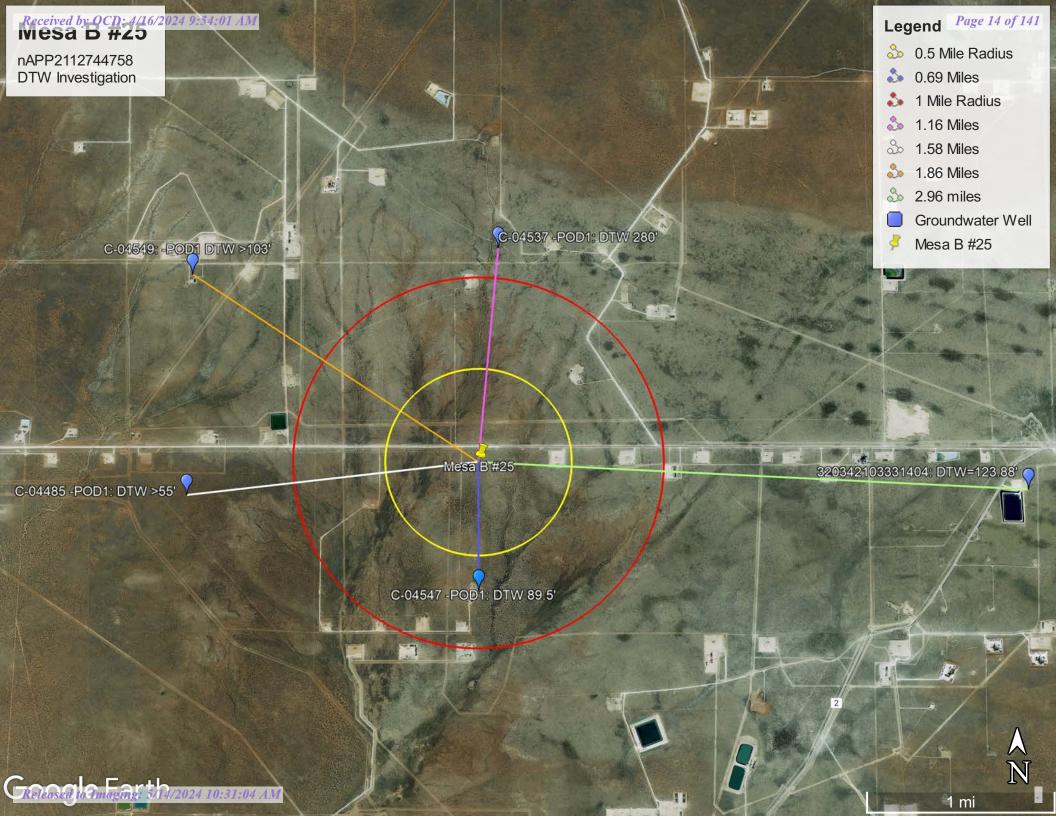
3 of 3

Page 12 of 141



APPENDIX A

Referenced Well Records and Closure Criteria Variance Approval



PAGE 1 OF 2

WELL TAG ID NO.

)A-Λ



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

OSE 011 AUG 2 2021 PM4:44

Z	OSE POD NO POD1 (M		0.)		WELL TAG ID NO. n/a			OSE FILE NO(C-4547	S).			
UTIO	WELL OWNE		5)					PHONE (OPTI	ONAL)			
OCA	BTA Oil P	roducers										
GENERAL AND WELL LOCATION	WELL OWNE 104 S. Peco		G ADDRESS					CITY Midland		STATE TX	7970 1	ZIP
) WE	104 5. 1 60							Miciand	· · · · · · · · · · · · · · · · · · ·	17	/9/01	
ANI	WELL			GREES 32	MINUTES 3	SECON 14.	34		REQUIRED: ONE TENT	TH OF A	SECOND	
RAL	LOCATIO (FROM GP	rs) —	ATITUDE	103	36	16.	N		QUIRED: WGS 84		0200112	
ENE	DESCRIPTIO		ONGITUDE					S (SECTION TO	WNSHIP RANGE) WH	FRE AVA		
1. G	NE SE SE											
	LICENSE NO		NAME OF LICENSED					· · · · · · · · · · · · · · · · · · ·	NAME OF WELL DRI			
	124				Jackie D. Atkins						g Associates, I	
	DRILLING S' 07/15/		DRILLING ENDED 07/15/2021		OMPLETED WELL (FT prary well materia			LE DEPTH (FT) 112	DEPTH WATER FIRS	unkno		
									STATIC WATER LEV	EL IN CO	OMPLETED WE	LL (FT)
N	COMPLETEI	O WELL IS:	ARTESIAN	DRY HO	LE [] SHALLOV	W (UNCO	NFINED)			89.	5	
ATIC	DRILLING FI	LUID:	AIR	MUD	ADDITIV	ES – SPEG	CIFY:					
ORM	DRILLING M	ETHOD:	ROTARY			OOL	✓ OTHE	R - SPECIFY:	Hollo	w Sten	n Auger	
2. DRILLING & CASING INFORMATION	DEPTH	(feet bgl)	BORE HOLE	CASING	MATERIAL AND GRADE	/OR	CA	ASING	CASING CASING WA		ING WALL	SLOT
SING	FROM	то	DIAM (inches)		each casing string,			VECTION YPE	INSIDE DIAM. (inches)		ICKNESS (inches)	SIZE (inches)
CAS	0	21	±8.5	note sections of screen) (add coupli Boring- HSA				ling diameter)		`		-
4 G &	21	112	±3.5	B	Boring- Air Rotary							-
ILLI												
DRI												
નં												
								,				
				1							<u> </u>	<u> </u>
		-										
			_									
	DEPTH	(feet bgl)	BORE HOLE	L	IST ANNULAR SE	EAL MA	TERIAL A	ND	AMOUNT		метно	
IAL	FROM	TO	DIAM. (inches)	GRA	AVEL PACK SIZE-	RANGI	E BY INTE	RVAL	(cubic feet)		PLACEN	MENT
VTER					· · · · · · · · · · · · · · · · · · ·							
K MA												
ILAI												
ANNULAR MATERIAL				1								
3. A		×										
	OSE INTER							WR-2	0 WELL RECORD	& LOG	(Version 06/3	0/17)
FILI	e no. (''-'	451	4)		POD NO).		TRN	NO. 698	いい	11	

-0

LOCATION 2

.

DSE DIT AUG 2 2021 PM4:44

	· · · ·											
	DEPTH () FROM	feet bgl) TO	THICKNESS (feet)	INCLUDE V	R AND TYPE OI VATER-BEARIN h supplemental a	G CAVITIES C	OR FRA	CTURE ZONE	S	BEA	TER RING? 5 / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	0	4	4		Caliche, C	consolidated, W	/hite			Y	🖌 N	· · · · · · · · · · · · · · · · · · ·
	4	44	40	Sand, Fine-g	grained, poorly gra			, Redish Brow	n	Y	√ N	
	44	51	7			tiff, Dark Brow	-			Y	√ N	
	51	103	52	San	dstone, Fine-grai			Brown		√ Y	N	
1			· · · · · · · · · · · · · · · · · · ·							Y	N	
4										Y	N	
MEL							<u> </u>			Y	N	
OF			· · · ·			=				Y	N	
Ö										Y	N	
		····								Y	N	
S S										Y	N	
4. HYDROGEOLOGIC LOG OF WELL				·						 Y	N	
No.				·····						Y	N	
										 Y	N	
4					<u> </u>					Y	N	
								- • • • •		Y	N	
		····								<u>-</u> Y	N	
					~					 Y	N	
										Y	N	
										Y	N	
										Y	N	
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEA	RING STRATA:				TOTA	LESTI	MATED	
	PUME		R LIFT	BAILER	OTHER - SPE	CIFY.) (gpm) :	0.00
									<i>.</i>			
z	WELL TES?	TEST I STAR	RESULTS - ATT. TIME, END TR	ACH A COPY OF ME, AND A TABL	DATA COLLEC	TED DURING		ESTING, INC		NG DISC	HARGE N	AETHOD,
NOISI												<i>D</i> .
	MISCELLAI	NEOUS INF	ORMATION: Te	mporary well ma	aterials removed	and the soil t	ooring p	lugged using	tremie	pipe to	total dep	th and landed
UPE			ce Ph	ment slurry of <6 ugging Record	5.0 gallons of w	ater per 94 lbs	sack of	f Portland TY	PE I/II	I Neat C	ement. S	ee attached
SDI												
TEST; RIG SUPER												
	PRINT NAM	E(S) OF DF	LILL RIG SUPER	VISOR(S) THAT	PROVIDED ON	SITE SUPERVI	SION O	F WELL CON	STRUC	CTION O	THER TH	AN LICENSEE:
S.	Shane Eldrid	lge, Camer	on Pruitt, Carmo	elo Trevino								
		SIGNED	EDEDV CEDTIE	IES THAT TO T	UE DEST OF UE							
RE	CORRECT R	ECORD OF	' THE ABOVE D	IES THAT, TO TH ESCRIBED HOLD	E AND THAT HI	OR SHE WIL	L FILE	GE AND BEL THIS WELL F	EF, THE ECOR	ie fore D WITH	GOING I	S A TRUE AND TE ENGINEER
UT	AND THE P	ERMIT HOI	DER WITHIN 3	0 DAYS AFTER C	COMPLETION O	F WELL DRIL	LING:					
6. SIGNATURE	Jack A	tkins			Jackie D. Atk	ins				07/24	9/2021	
6. S)	0		······································				_	<u></u>				
		SIGNATU	JRE OF DRILLE	R / PRINT SIGN	NEE NAME						DATE	
FOR	OSE INTERN	IAL USE						WR-20 WE	LRFC	CORD &		sion 06/30/2017)
	ENO. C-	154	1 -		POD NO.	1		TRN NO.				
LOC	CATION 2	es-	33E-0'	7 4	4-2		WELL	TAG ID NO.	Nf	7		PAGE 2 OF 2

2021-07-28_C-4547_POD1_OSE_Well Record and Log_mesa1-for sign

Final Audit Report

2021-07-29

Created:	2021-07-29	OSE DIT RUG 2 2021 pm4:44
By:	Lucas Middleton (lucas@atkinseng.com)	
Status:	Signed	
Transaction ID:	CBJCHBCAABAA3aQOFUKeCXoHbozKpK1XeoMdl53lwclm	
L		· · · · · · · · · · · · · · · · · · ·

"2021-07-28_C-4547_POD1_OSE_Well Record and Log_mesa1 -for sign" History

- Document created by Lucas Middleton (lucas@atkinseng.com) 2021-07-29 8:40:54 PM GMT- IP address: 69.21.248.123
- Document emailed to Jack Atkins (jack@atkinseng.com) for signature 2021-07-29 8:41:43 PM GMT
- Email viewed by Jack Atkins (jack@atkinseng.com) 2021-07-29 - 8:43:29 PM GMT- IP address: 64.90.153.232
- Document e-signed by Jack Atkins (jack@atkinseng.com)
 Signature Date: 2021-07-29 8:44:00 PM GMT Time Source: server- IP address: 64.90.153.232
- Agreement completed. 2021-07-29 - 8:44:00 PM GMT





WELL RECORD & LOG USE OF JUN 21 2021 #4101.3 OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

z	OSE POD NO C-4537			<u></u>	WELL TAG ID NO 20E6C			OSE FILE NO(S). C-4537				
VIIO	WELL OWN							PHONE (OPTIC	ONAL)			
OCA	BASIN PR	OPERTI	ES RANCHES LLC	2								
GENERAL AND WELL LOCATION	WELL OWN							CITY		STATE	ZIP	
WE	3300 N A :	SIKEEI,	BLDG 1, STE 220					MIDLAND		TX	79705	
AND	WELL		DE	GREES 32	minutes 04	SECON						
TVI	LOCATIO (FROM GP		TITUDE		·		N		REQUIRED: ONE TEN QUIRED: WGS 84	TH OF A SECOND		
NEI		LO	NGITUDE	103	36	10		L	-			
1. GI	DESCRIPTIO	ON RELATI	NG WELL LOCATION TO) STREET ADD	RESS AND COMMO	N LANDM	ARKS – PLS	S (SECTION, TO	WNSHJIP, RANGE) WH	ERE AVAILABLE		
	LICENSE NO		NAME OF LICENSED	DRILLER					NAME OF WELL DR	ILLING COMPANY		
	WD1			Dittout	Bryce Wallace					Drillers Corporation		
	DRILLING S		DRILLING ENDED	DEPTH OF CO	OMPLETED WELL (F	T)		LE DEPTH (FT)	DEPTH WATER FIR	ST ENCOUNTERED (FT)	
ъ с	06/11	/21	06/12/21		500			500		280		
N	COMPLETEI	O WELL IS:	ARTESIAN	DRY HO	LE 🔀 SHALLO	W (UNCO	NFINED)		STATIC WATER LEV	EL IN COMPLETED W 280	ELL (FT)	
ATIC	DRILLING FI	LUD:	🗹 AIR	门 MUD	ADDITIV	/ES – SPEC	DIFY:					
& CASING INFORMATION	DRILLING M	ETHOD:	☑ ROTARY	HAMME	R 🗍 CABLE 1	rool	☐ OTHE	R SPECIFY:				
INFC	DEPTH	(feet bgl)	BORE HOLE	CASING	MATERIAL ANI	D/OR	CA	ASING	CASING	CASING WALL	SLOT	
ING	FROM	ТО	DIAM	(include	GRADE each casing string	and	CONN	NECTION YPE	INSIDE DIAM.	THICKNESS	SIZE	
CAS			(inches)		sections of screen		(add coup)	ling diameter)	(inches)	(inches)	(inches)	
8	0	20	12 3/4		STEEL SDR17 PVC			N/A PLINE	8.28	.337 SDR17	<u> </u>	
LIN	300	500	7 7/8	· · · · · ·	SDR17 PVC			PLINE	4.3	SDR17	.032	
DRILLING												
2. D									· · · · · · · · · ·			
	····· ,·											
	DEPTH	(feet bgl)	BORE HOLE	L1	ST ANNULAR S	EAL MA	TERIAL A	ND	AMOUNT	метно		
IVI	FROM	ТО	DIAM. (inches)	GRA	VEL PACK SIZE	-RANGE	BY INTE	RVAL	(cubic feet)	PLACE	MENT	
TER	0	20	12 3/4			MENT			10	TOPI		
VW 1	0 300	20	7 7/8	ļ		MENT	JD		6 6	TOP I TOP I		
3. ANNULAR MATERIAL			/ //8		8/10 SIL	ACA SAP			40		'ILL	
NNC												
3. A					<u>-</u> <u>.</u>						· ·	

FILE NO. C-4537 POD NO. TRN NO. C95385 LOCATION C 255.33E.31.444 Well TAG ID NO. DELC. PAGE 1 OF 2	FOR OSE INTERNAL USE			WR-20 WEL	L RECORD & LOG (Ver	sion 06/30/17)
LOCATION SHK 255.33E.31.444 WELL TAG ID NO. DOELC PAGE 1 OF 2	FILE NO.	(-4537	POD NO.	TRN NO.	(A5305	>
	LOCATION	255.3	3E. 31.444	WELL TAG ID NO.	ZOELC	PAGE 1 OF 2

_

		5. MOR 2002 MAR							dan bab		
	DEPTH (1		THICKNESS		ND TYPE OF MATE ER-BEARING CAVI			s	WA1 BEAR		ESTIMATED YIELD FOR WATER-
	FROM	то	(feet)	(attach su	pplemental sheets to	fully de	scribe all units)		(YES /	(NO)	BEARING ZONES (gpm)
	0	5	5		SAND				Y	√ N	
	5	25	20		CALICH	E			Y	√ N	
	25	220	195	··· · · · ·	RED CLAY & RED	SILTST	ONE		Y	√ N	
	220	340	120		RED SANDS	FONE			√ Y	N	5.00
	340	500	160	RE	D SANDSTONE & R	ED SIL	ISTONE		Y	√ N	
Ц									Y	N	
4. HYDROGEOLOGIC LOG OF WELL									Y	N	
ŌF									Y	N	
LOG									Y	Ν	
() TC									Y	Ν	
TO									Y	Ν	
GEC									Y	Ν	
ORO									Y	N	
IXH									Y	Ν	
4									Y	N	
									Y	N	
									Y	N	
									Y	N	
									Y	N	
									Y	N	
									Y	N	
	METHOD U	SED TO E	STIMATE YIELD	OF WATER-BEARIN	G STRATA:				L ESTIM		
	PUM	P	IR LIFT	BAILER 0	THER - SPECIFY:			WEL	L YIELD	(gpm):	5.00
		TEST	DESITTS ATT	ACH A COPY OF DA	TA COLLECTED DI		VELL TESTINC NY			LADOR	AETHOD
NO	WELL TES	T STAR	T TIME, END TH	ME, AND A TABLE S	HOWING DISCHAR	GE ANT	DRAWDOWN OV	ER THE	E TESTIN	G PERIC	D.
RVISION	MISCELLA	NEOUS IN	FORMATION:								
SU .											
RIC											
TEST; RIG SUPE	PRINT NAN	E(S) OF D	DILL DIC SUIDED	VISOR(S) THAT PRO	VIDED ONSITE SU	DEDVIC	ION OF WELL CON	STRUC		TUED TU	AN LICENSEE.
5. T		11,5) 01 D	KIEL KIO SOFEK		VIDED ONSITE SU	EK V 15	ION OF WELL CON	SIRUC		ITEK IT	IAN LICENSEE.
			· · · · · · · · · · · · · · · · · · ·								
				IES THAT, TO THE E							
SIGNATURE	AND THE P	ERMIT HO	F THE ABOVE D DLDER WITHIN 2	ESCRIBED HOLE AN 0 DAYS AFTER COM	ND THAT HE OR SH IPLETION OF WELL	E WILL DRILL	FILE THIS WELL R ING:	ECORI	D WITH T	THE STA	TE ENGINEER
LAN		7	¥ l								
SIG	14	. N		H	Bryce Wallace				06/16	5/2021	
ý		SIGNAT	URE OF DRILLE	R / PRINT SIGNEE	NAME		. 			DATE	
							<u>an de la compact</u> ione				
	R OSE INTERI E NO.		27		POD NO.		WR-20 WE TRN NO.	LL REC			sion 06/30/2017)
	CATION	- 49	ן כנ		FOD NO.	/	L	u.	953	2	PAGE 2 OF 2
1 200	CIRCUIT					1	WELL TAG ID NO				T TAUE 2 OF 2



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

TION		4485	5	OWL 362	WELL TAG ID NO. NA		OSE FILE N	o(s). 4485		
WELL LOCATION	KJ EN	VIRONMI	ENTAL			51	PHONE (OP 214-287-5	TIONAL)		
WELL	500 MC	OSSELEY	ING ADDRESS				CITY CROSS R	DADS	STATE TX 76227	ZIP
GENERAL AND	WE LOCA (FROM		LATITUDE	DEGREES 3548560 629271	MINUTES SEA	CONDS N		Y REQUIRED: ONE TE	NTH OF A SECOND	
1. GENI	DESCRIP		ONGITUDE		ESS AND COMMON LANE	W DMARKS - PLS	0.0000000000000000000000000000000000000	QUIRED: WGS 84 DWNSHJIP, RANGE) W	HERE AVAILABLE	
	LICENSE		NAME OF LICENSE	DDRILLER				NAME OF WELL D	RILLING COMPANY	
		01186		ROD	NEY HAMMER				VIRO-DRILL, INC.	
	DRILLING 10/0:	5/2020	DRILLING ENDED 10/06/2020	DEPTH OF COM	PLETED WELL (FT)	BORE HOL	E DEPTH (FT)		RST ENCOUNTERED (FT)
NO	COMPLET	ED WELL IS:		T DRY HOLE		CONFINED)		STATIC WATER LE	VEL IN COMPLETED WI	ELL (FT)
	DRILLING	FLUID:	☐ AIR	MUD	ADDITIVES - SP	ECIFY:				
ORV	DRILLING		ROTARY	HAMMER	CABLE TOOL	XOTHER	- SPECIFY:	SA		
DRILLING & CASING INFORMATION	DEPTH FROM	TO	BORE HOLE DIAM (inches)	(include eac	ATERIAL AND/OR GRADE h casing string, and tions of screen)	Ι	ING CTION PE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches
3	55	45		Scre		FJT	g drameter)	2"	2"	-010
	45	Ó	8"	310	ink	11		11	· · ·	JOR
									ALL ALL	2020
F										Nov
F									=	2
										0
T	DEPTH (feet bgl)	BORE HOLE	1107					1	
1	FROM	то	DIAM. (inches)	GRAVEL	NNULAR SEAL MA	BY INTERV		AMOUNT (cubic feet)	METHOD	
	55 43	43 41	8" 8"	Sand 10/20 Hole Plug				10	tremi	€
	41	0	8".	Grou	it			ا 100 جوما.	+	
\vdash										
E NO	INTERNA	-25°	99		POD NO.		WR-20 V	VELL RECORD &	LOG (Version 06/30/	17)

3

PAGE 1 OF 2

WELL TAG ID NO.

an

-

-

LOCATION

			TE THE HERE AND								
	DEPTH (feet bgl)		COLORA	ND TYPE OF MATERIAL	ENCOL	INTERED	WA			MATED
	FROM TO (feet) INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units) BEA (YE									WA BEA	D FOR TER- RING S (gpm)
	0	10		Sand	Y			tor			
	10	25		gravel	+ gravel -+ Calicl			Y	0		
	25	45		Calic	ho	<u></u>		Y	0		
	45	35		Sand	stone			Y	8		
					<u> </u>			Y	N		
F								Y	N		
4. HYDROGEOLOGIC LOG OF WELL						-		Y	N		
OF								Y	N		
TOC								Y	N		
GIC								Y	N		1
DLO						199		Y	N		
GEC								Y	N		
DRO								Y	N		
HY.								Y	N		
4								Y	N		
								Y	N		
								Y	N		
								Y	N		
								Y	N	6	
								Y	N		
								Y	N	20	8
	METHOD US	SED TO EST	FIMATE YIELD	OF WATER-BEARIN	IG STRATA:		1.126	TAL ESTIM		16	N
	Р Р Р Р Р Р Р Р Р Р Р Р Р Р Р Р Р Р Р			BAILER 0	THER - SPECIFY:		W	ELL YIELD	(gpm):	100.	00
NO	WELL TEST	TEST R START	ESULTS - ATTA	ACH A COPY OF DA 4E, AND A TABLE S	TA COLLECTED DURING	WELL ND DRA	TESTING, INCLU WDOWN OVER 1	DING DISCH	ARGE M	ETHOD	.2
NIS!	MISCELLAN	EOUS INFO	ORMATION:							-	5
PER										Ē	XH.
5. TEST; RIG SUPERVISION										F	
; RI									3	6	
LEST	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:										
								001101101		IN LICE	NOBE.
	THE UNDER	SIGNED HE	REBY CERTIFI	ES THAT, TO THE B	BEST OF HIS OR HER KNO	WLEDO	SE AND BELIEF	THE FOREG	DING IS 4	TRUE	AND
SIGNATURE	CORRECTRI	CURD UF	THE ABOVE DE	SCRIBED HOLF AN	ND THAT HE OR SHE WIL	I FILE	THIS WELL RECO	ORD WITH T	HE STAT	E ENGI	NEER
NAT	Ο		1			ento.					
SIG	ika	my 1		- Rai	ney Hamme	r		10-14	-10		
6.		SIGNATU	RE OF DRILLEF	R / PRINT SIGNEE					DATE		100
FOR	OSE INTERN						-				
1	OSE INTERN	ALUSE			POD NO.		WR-20 WELL R	ECORD & L	OG (Versi	on 06/3	0/2017)
	ATION					WELL				PACE	2052
						WELL	TAG ID NO.			PAGE	2 OF 2



WELL RECORD & LOG

DSE DIT AUG 2 2021 PM4:45

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

ION	OSE POD NO POD1 (N	fW-1)			WELL TAG ID NO. n/a			OSE FILE NO(C-4549	S).				
LOCAT	WELL OWN BTA Oil P	roducer	S		PHONE (OPTIONAL)								
GENERAL AND WELL LOCATION	WELL OWN 104 S. Pec		NG ADDRESS		CITY Midland		state TX 79701	ZIP					
Ê	WELL	T	D	EGREES	MINUTES	SECON	DS			· · · · · · · · · · · · · · · · · · ·			
N,	LOCATIO			32	4	40.9	92 .	* ACCURACY	REQUIRED: ONE TEN	TH OF A SECOND			
IERAI	(FROM GI	rs)	LATITUDE	103	37	53.	N		QUIRED: WGS 84	IN OF A SECOND			
	DESCRIPTI	ON RELAT	TING WELL LOCATION T	O STREET ADDI	ESS AND COMMON	LANDM	DVC DIC	CEPCTION TO					
1.6			11 T26S R32E				1000 - F 120	S (SECTION, TO	WNSHIF, KANGE) WH	ERE AVAILABLE			
	LICENSE NO).	NAME OF LICENSEI	DRILLER					NAME OF WELL DR				
	124	49			Jackie D. Atkins				Atkins Eng	ineering Associates, I	nc.		
	DRILLING S 07/14/		DRILLING ENDED 07/14/2021		DEPTH OF COMPLETED WELL (FT) BORE HOLE DEPTH (F temporary well material 103				DEPTH WATER FIR:	st encountered (FT) n/a			
Z	COMPLETE	D WELL IS	S: 🗍 ARTESIAN	🗹 DRY HOI	DRY HOLE SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a			
CASING INFORMATION	DRILLING F	LUID:	AIR	MUD	ADDITIV	ES - SPEC	JFY:		<u> </u>	·····			
.v													
N	DRILLING N	ETHOD:	ROTARY		[√] OTHER	R - SPECIFY:	Hollo	w Stem Auger					
NFC	DEPTH (feet bgl) BORE HOLE			CASING	CASING MATERIAL AND/OR				CL CDIC				
5	FROM TO				GRADE			SING	CASING INSIDE DIAM.	CASING WALL THICKNESS	SLOT		
Ä			(inches)		each casing string,	and	CONNECTION TYPE		(inches)	(inches)	SIZE (inches)		
CĂ		100					(add coupli	ing diameter)		(menes)	(
જ	0	103	±8.5	Boring- HSA				-		-			
Ba													
ILL													
2. DRILLING &													
2.]													
					· · · · · · · · · · · · · · · · · · ·								
	· · · · · ·		-							1			
		·····											
	DEPTH	(feet hel)	BORE HOLE		ST ANNULAR SE			NID					
H	FROM	TO	DIAM. (inches)		VEL PACK SIZE-				AMOUNT (cubic feet)	METHO PLACEM			
RI	TROM	10											
TE													
MA													
AR													
ANNULAR MATERIAL													
N													
3. A													
-										·			
			···]	.1									
<u>FOR</u>	OSE INTER	NAL US	E					WR-20	WELL RECORD	k LOG (Version 06/30	/17)		

FILE NO. C- 4549	POD NO.	TRN NO. 698318	
LOCATION 265-32E-11	1.1.1	WELL TAG ID NO. AA-	PAGE 1 OF 2
<u> </u>	•		

.

OSE DIT AUG 2 2021 PM4:45

	·											
	DEPTH (feet bgl) TO	THICKNESS (feet)	INCLUDE WATH	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)						TER ING? / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	0	4	4	· · · · · · · · · · · · · · · · · · ·	Caliche, C	onsolidated, W	/hite			Y	√ N	
	4 9 5 Caliche, Consolidated , with fine-grained, Tan								Y	✓ N		
	9	14	5		Caliche, C	onsolidated, W	/hite			Y	√ N	
	14	19	5	Calicl	he, Consolida	ted, with fine-	grained, 7	l'an		Y	✓ N	
	19	69	50			graded, with ca		·		Y	√ N	
	69	79	103	Cla	ay, Stiff, High	Plasticity, Da	rk Brown,			Y	√ N	
MEL			· · · · · · · · · · · · · · · · · · ·							Y	N	
OF				· · · · · · · · · · · · · · · · · · ·						Y	N	
Q										Y	N	· · · · · · · · · · · · · · · · · · ·
										Y	N	
6										Y	N	
4. HYDROGEOLOGIC LOG OF WELL										Y	N	
Ro					и . <u>.</u>					Y	N	
										Y	N	
4										Y	N	
1										Y	N	
1										Y	N	-
										Y	N	
										Y	N	
										Y	N	
								·		Y	N	
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARING	G STRATA:				TOT	AL ESTIM	ATED	
	PUM		R LIFT	BAILER OT	HER - SPE	JFY:			WEL	L YIELD	(gpm) :	0.00
						······································				· · · ·		`
z	WELL TEST	T TEST	RESULTS - ATTA I TIME, END TIN	ACH A COPY OF DAT ME, AND A TABLE SH	A COLLEC	TED DURING	WELL T. D DRAV	ESTING, INC VDOWN OVI	LUDII ER THI	NG DISCH	IARGE N G PERIO	AETHOD, D.
NOISL	MISCELLAI	l						-				
ERV	MISCELLA	NEOUS INF	Ie	mporary well materia	als removed	and the soil b	oring ba	ckfilled usir	g drill	cuttings	from tot	al depth to ten
SUP			100	t below ground surfa	ice, men nyt	irated benton	tte cmps	from ten fee	t Delov	w ground	surface	to surface.
RIG												
TEST; RIG SUPERV												
5. TE				VISOR(S) THAT PRO	VIDED ONS	ITE SUPERVI	SION OF	WELL CON	STRUC	CTION OT	HER TH	AN LICENSEE:
	Shane Eldric	lge, Camer	on Pruitt, Carme	elo Trevino								
	THE UNDER	SIGNED H	EREBY CERTIF	IES THAT, TO THE B	EST OF HIS	OR HER KNO	WLEDG	E AND BEL	EF, TI	IE FORE	GOING I	S A TRUE AND
6. SIGNATURE	CORRECT R	ECORD OF	F THE ABOVE D	ESCRIBED HOLE AN	D THAT HE	OR SHE WIL	L FILE T	HIS WELL R	ECOR	D WITH 1	THE STA	TE ENGINEER
IATI	AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:											
SIG	Jack Ar	teins		Jac	kie D. Atki	ns				07/29/	/2021	
6.	·	SIGNATI		R / PRINT SIGNEE				<u> </u>			DATE	
											DATE	
	FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 06/30/2017)											
		72	₩ <u></u>	l	POD NO.	<u>(</u>		TRN NO.	00	183	LY_	
	CATION 2	63-1	SUE-1		$ \cdot \cdot $		WELL '	TAG ID NO.		NA		PAGE 2 OF 2



National Water Information System: Web Interface

USGS Water Resources

 Data Category:
 Geographic Area:

 Groundwater
 V

✓ GO

USGS Home Contact USGS Search USGS

Click to hideNews Bulletins

- Explore the NEW USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- <u>Full News</u> 🔊

Groundwater levels for New Mexico

Click to hide state-specific text

Important: <u>Next Generation Monitoring Location Page</u>

Search Results -- 1 sites found

Agency code = usgs site_no list =

• 320342103331401

Minimum number of levels = 1 <u>Save file of selected sites</u> to local disk for future upload

USGS 320342103331401 26S.33E.03.444113

Lea County, New Mexico Latitude 32°03'42", Longitude 103°33'14" NAD27 Land-surface elevation 3,334 feet above NAVD88 This well is completed in the Other aquifers (N9999OTHER) national aquifer. This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

<u>Table of data</u>

Tab-separated data

Graph of data

Reselect period

Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1970-12-07		D	62610		3221.09	NGVD29	Р	Z		
1970-12-07		D	62611		3222.67	NAVD88	Р	Z		
1970-12-07		D	72019	111.33			Р	Z		
1976-01-08		D	62610		3221.62	NGVD29	1	Z		
1976-01-08		D	62611		3223.20	NAVD88	1	Z		
1976-01-08		D	72019	110.80			1	Z		
1981-03-24		D	62610		3222.20	NGVD29	Р	Z		
1981-03-24		D	62611		3223.78	NAVD88	Р	Z		
1981-03-24		D	72019	110.22			Р	Z		
1986-03-04		D	62610		3219.42	NGVD29	1	Z		
1986-03-04		D	62611		3221.00	NAVD88	1	Z		
1986-03-04		D	72019	113.00			1	Z		
1991-06-12		D	62610		3219.42	NGVD29	1	Z		
1991-06-12		D	62611		3221.00	NAVD88	1	Z		
1991-06-12		D	72019	113.00			1	Z		

Released to Imaging: 5/14/2024 10:31:04 AM

Page 25 of 141

Received by OCD: 4/16/2024 9:54:01 AM

Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1996-03-06		D	62610		3219.98	NGVD29	1	S		
1996-03-06		D	62611		3221.56	NAVD88	1	S		
1996-03-06		D	72019	112.44			1	S		
2001-02-27		D	62610		3220.02	NGVD29	1	S		
2001-02-27		D	62611		3221.60	NAVD88	1	S		
2001-02-27		D	72019	112.40			1	S		
2006-02-07	17:47 UTC	m	62610		3208.54	NGVD29	1	S	USGS	
2006-02-07	17:47 UTC	m	62611		3210.12	NAVD88	1	S	USGS	
2006-02-07	17:47 UTC	m	72019	123.88			1	S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	Р	Pumping
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	А	Approved for publication Processing and review completed.

Questions or Comments

Automated retrievals Help Data Tips Explanation of terms Subscribe for system changes News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey Title: Groundwater for New Mexico: Water Levels URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: <u>New Mexico Water Data Maintainer</u> Page Last Modified: 2023-12-05 15:18:37 EST 0.3 0.25 nadww02 USA.gov

.

From:	Velez, Nelson, EMNRD
To:	Hadlie Green
Cc:	<u>Kelton Beaird; Tacoma Morrissey; Aimee Cole</u>
Subject:	Re: [EXTERNAL] BTA - Mesa B #25 (Incident Number nAPP2122744758) - Closure Criteria Variance Request
Date:	Wednesday, December 6, 2023 10:51:56 AM
Attachments:	image001.png
	image002.png
	image003.png
	image004.png
	<u>Outlook-iyby1eds.png</u>

[**EXTERNAL EMAIL**]

Good morning Hadlie,

Thank you for the corrsepondence. Your request for a Closure Criteria Variance to reflect groundwater 51' – 100' as shown in Table 1 of 19.15.29.12 NMAC is approved.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Regards,

Nelson Velez • Environmental Specialist - Adv Environmental Bureau | EMNRD - Oil Conservation Division 1000 Rio Brazos Road | Aztec, NM 87410 (505) 469-6146 | nelson.velez@emnrd.nm.gov http://www.emnrd.state.nm.us/OCD/



From: Hadlie Green <hgreen@ensolum.com>
Sent: Tuesday, December 5, 2023 3:17 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Kelton Beaird <KBeaird@btaoil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>; Aimee
Cole <acole@ensolum.com>
Subject: [EXTERNAL] BTA - Mesa B #25 (Incident Number nAPP2122744758) - Closure Criteria

Variance Request

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good afternoon Nelson,

I'd like to request a Closure Criteria Variance for a historical incident that occurred on March 31, 2021 at a BTA Oil Producers, LLC (BTA) Site Mesa B #25 (Incident Number nAPP2122744758; 32.06395, -103.604785).

A valve washout resulted in the release of approximately 90 barrels (bbls) of produced water. BTA immediately recovered approximately 74 bbls of produced water and completed an initial scrape of the saturated soil. BTA will vertically and laterally delineate the release per NMAC 19.15.29.

Attached is groundwater research from the area surrounding the release. All nearby USGS and NMOSE wells indicate depth to groundwater between 51 and 100 feet bgs or greater than 100 feet bgs. The nearest borehole with depth to groundwater data is located 0.69 miles south of the release area and has a recorded depth to groundwater of 89.5' from July 2021.

Due to the regional depth to groundwater and the site being in medium potential karst area, BTA requests a Closure Criteria Variance to reflect groundwater 51' - 100' as shown in Table 1 of 19.15.29.12 NMAC.

Please let me know if you have any questions,

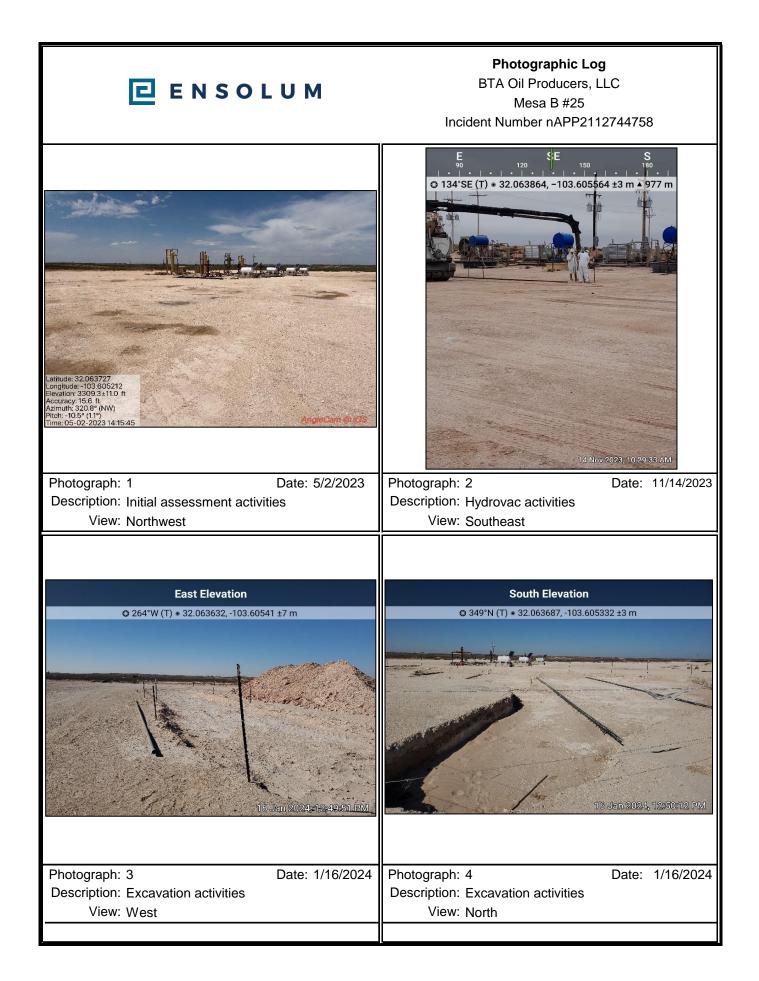


Hadlie Green Project Geologist 432-557-8895 hgreen@ensolum.com Ensolum, LLC in f ♥



APPENDIX B

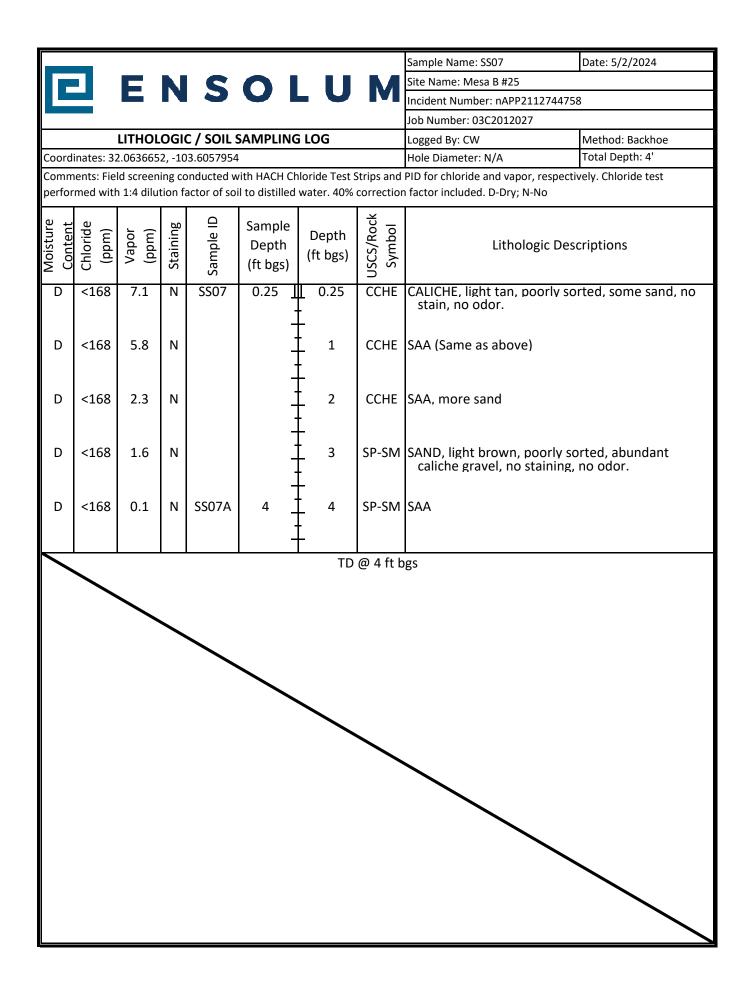
Photographic Log

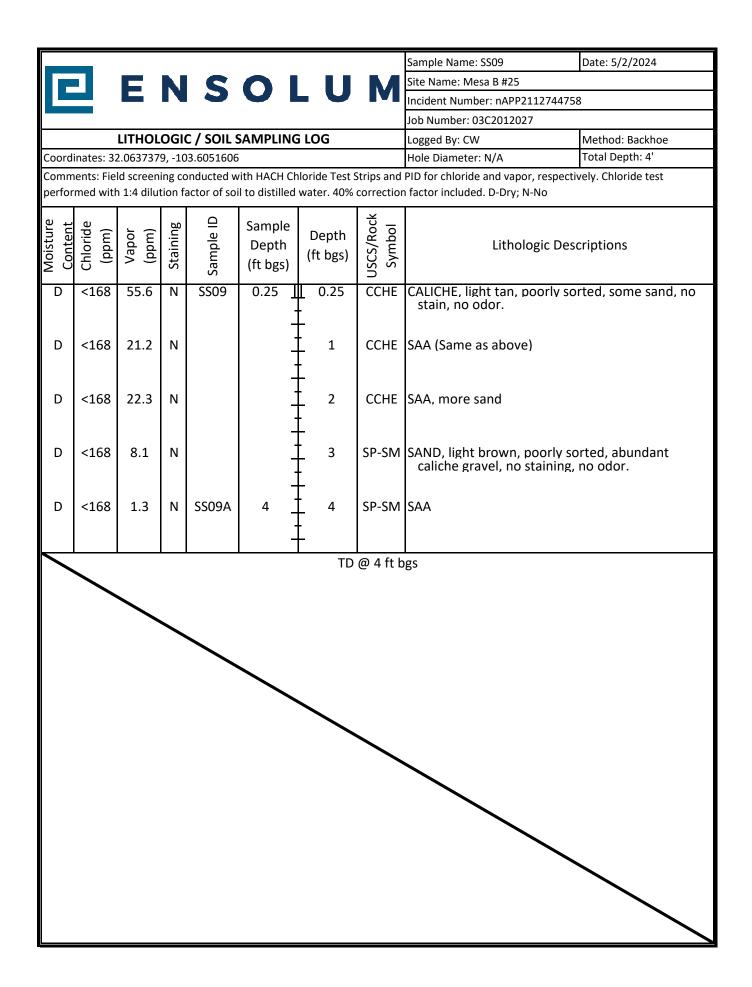


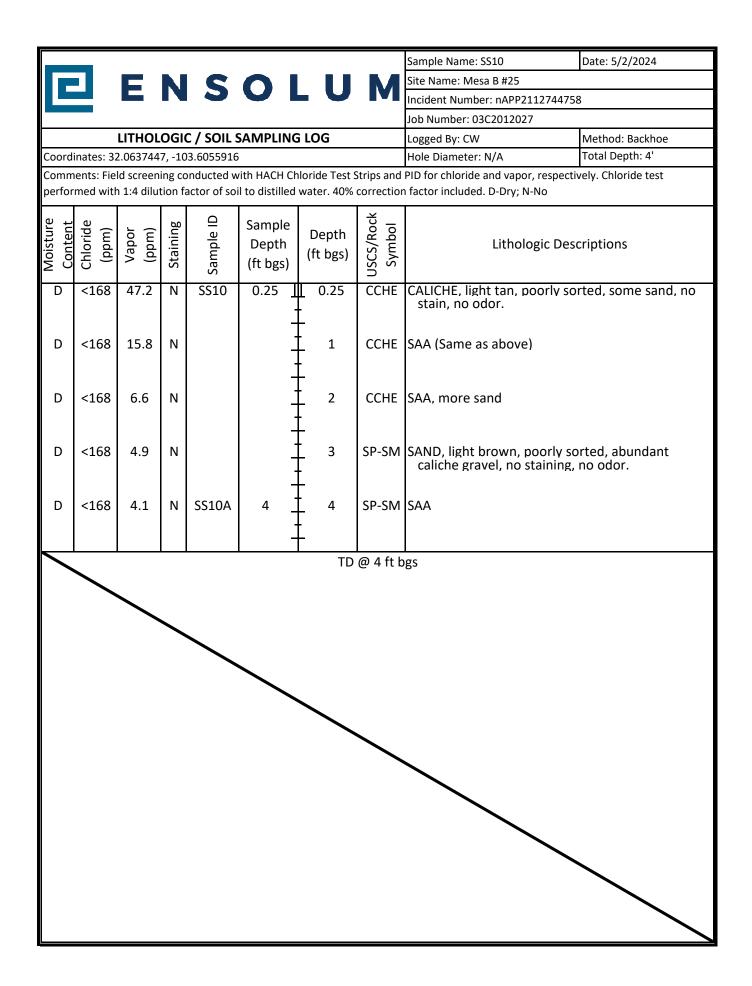


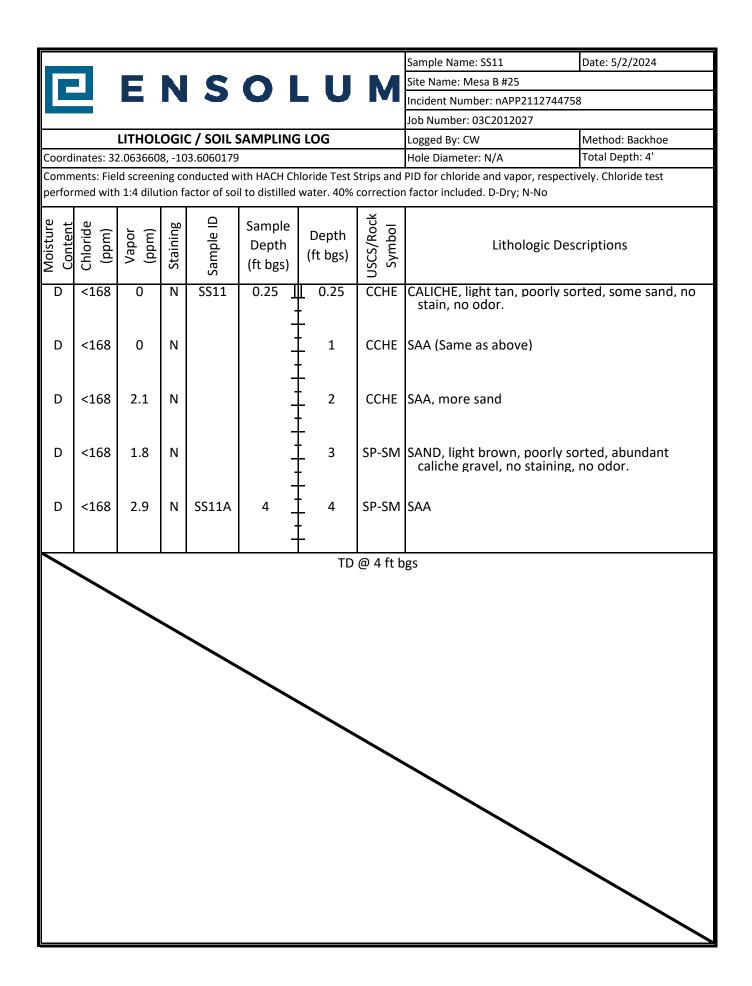
APPENDIX C

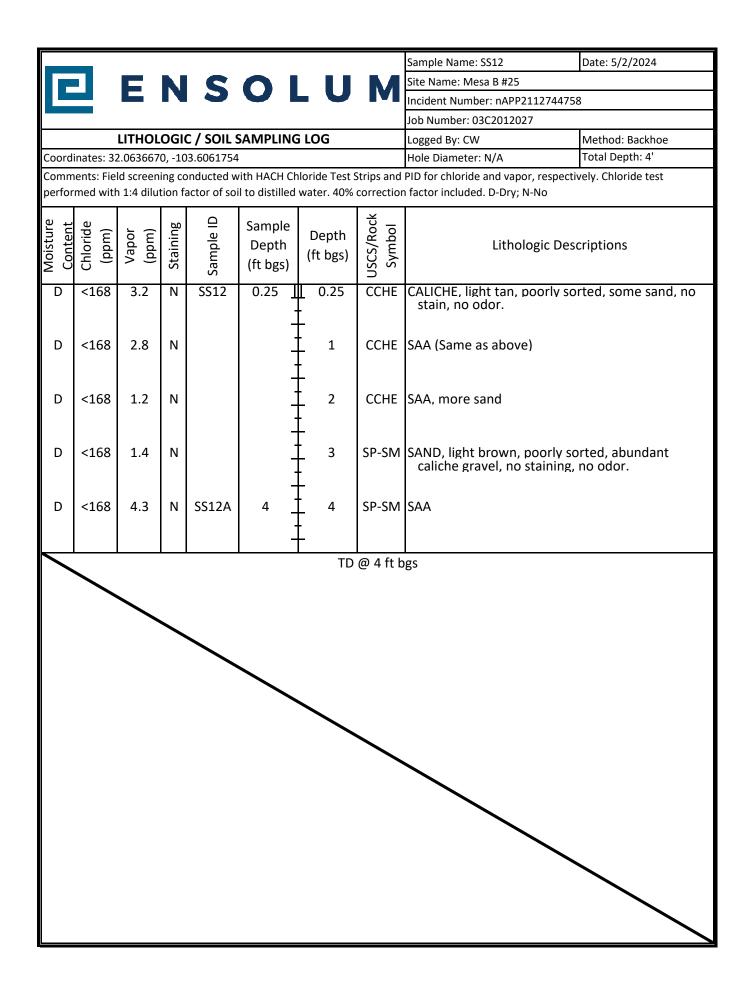
Lithologic Soil Sampling Logs













APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



May 09, 2023

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: MESA B #25

Enclosed are the results of analyses for samples received by the laboratory on 05/03/23 12:15.

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/qa/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)

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. Keine

Celey D. Keene Lab Director/Quality Manager



ENSOLUM, LLCProject:MESA B #25705 W WADLEY AVE.Project Number:03C2012027MIDLAND TX, 79705Project Manager:HADLIE GREENFax To:	Reported: 09-May-23 14:34
--	------------------------------

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS 01 0.25'	H232184-01	Soil	02-May-23 10:20	03-May-23 12:15
SS 02 0.25'	H232184-02	Soil	02-May-23 10:30	03-May-23 12:15
SS 03 0.25'	H232184-03	Soil	02-May-23 10:40	03-May-23 12:15
SS 04 0.25'	H232184-04	Soil	02-May-23 10:50	03-May-23 12:15
SS 05 0.25'	H232184-05	Soil	02-May-23 11:00	03-May-23 12:15
SS 06 0.25'	H232184-06	Soil	02-May-23 11:10	03-May-23 12:15
SS 07 0.25'	H232184-07	Soil	02-May-23 11:20	03-May-23 12:15
SS 08 0.25'	H232184-08	Soil	02-May-23 11:30	03-May-23 12:15
SS 09 0.25'	H232184-09	Soil	02-May-23 11:40	03-May-23 12:15
SS 10 0.25'	H232184-10	Soil	02-May-23 11:50	03-May-23 12:15

05/09/23 - I made revisions to the wrong work order and didn't catch it before sending out. This is the corrected report and will replace the one I sent earlier today 05/09/23.

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: MESA B #25 Reported: Project Number: 03C2012027 09-May-23 14 Project Manager: HADLIE GREEN Fax To:									
			SS H2321	01 0.25 184-01 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	240		16.0	mg/kg	4	3050433	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050334	JH/	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			103 %	71.5	-134	3050334	JH/	05-May-23	8021B	
Petroleum Hydrocarbons by GC	FID									S-06
GRO C6-C10*	<100		100	mg/kg	10	3050330	MS	05-May-23	8015B	
DRO >C10-C28*	12100		100	mg/kg	10	3050330	MS	05-May-23	8015B	
EXT DRO >C28-C36	5640		100	mg/kg	10	3050330	MS	05-May-23	8015B	
Surrogate: 1-Chlorooctane			116 %	48.2	-134	3050330	MS	05-May-23	8015B	
Surrogate: 1-Chlorooctadecane			270 %	49.1	-148	3050330	MS	05-May-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705			Project Num Project Mana Fax SS		2012027 DLIE GREEM	١		0	Reported: 9-May-23 14:	34
			Reporting Limit		,					
Analyte	Result	MDL	Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	448		16.0	mg/kg	4	3050433	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050334	JH/	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			106 %	71.5	-134	3050334	JH/	05-May-23	8021B	
Petroleum Hydrocarbons by GC	FID									S-06
GRO C6-C10*	<100		100	mg/kg	10	3050330	MS	05-May-23	8015B	
DRO >C10-C28*	30100		100	mg/kg	10	3050330	MS	05-May-23	8015B	
EXT DRO >C28-C36	14100		100	mg/kg	10	3050330	MS	05-May-23	8015B	
Surrogate: 1-Chlorooctane			128 %	48.2	-134	3050330	MS	05-May-23	8015B	
Surrogate: 1-Chlorooctadecane			488 %	49.1	-148	3050330	MS	05-May-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705			Project Num Project Mana Fax		2012027 DLIE GREEM	١		0	Reported: 9-May-23 14:	34
			H232	184-03 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	848		16.0	mg/kg	4	3050434	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050334	JH/	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			108 %	71.5	-134	3050334	JH/	05-May-23	8021B	
Petroleum Hydrocarbons by GC	FID									S-04
GRO C6-C10*	23.5		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
DRO >C10-C28*	3450		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
EXT DRO >C28-C36	4280		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			119 %	48.2	-134	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			174 %	49.1	-148	3050330	MS	04-May-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705			Project Num Project Mana Fax		2012027 DLIE GREEM	١		0	Reported: 9-May-23 14:	34
			H232	184-04 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	208		16.0	mg/kg	4	3050434	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050334	JH/	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			105 %	71.5	-134	3050334	JH/	05-May-23	8021B	
<u>Petroleum Hydrocarbons by G</u>	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
DRO >C10-C28*	547		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
EXT DRO >C28-C36	1670		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			112 %	48.2	-134	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			134 %	49.1	-148	3050330	MS	04-May-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705			Project Num Project Mana Fax		2012027 DLIE GREEM	۷		0	Reported: 9-May-23 14:	34
			H232	184-05 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	8260		16.0	mg/kg	4	3050434	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050334	JH/	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			106 %	71.5	-134	3050334	JH/	05-May-23	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
DRO >C10-C28*	7230		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
EXT DRO >C28-C36	3120		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			80.8 %	48.2	-134	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			139 %	49.1	-148	3050330	MS	04-May-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: MESA B #25 Reported: Project Number: 03C2012027 09-May-23 14:34 Project Manager: HADLIE GREEN Fax To:									
				06 0.25 184-06 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds	220		16.0		4	3050434	AC	04 Marc 22	4500-Cl-B	
Chloride	320		16.0	mg/kg	4	3030434	AC	04-May-23	4500-CI-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050334	JH/	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			103 %	71.5	-134	3050334	JH/	05-May-23	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
DRO >C10-C28*	1230		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
EXT DRO >C28-C36	2970		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			111 %	48.2	-134	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			137 %	49.1	-148	3050330	MS	04-May-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: MESA B #25 Reported: Project Number: 03C2012027 09-May-23 14:34 Project Manager: HADLIE GREEN Fax To: SS 07 0.25'									
			H2321	184-07 (So	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	80.0		16.0	mg/kg	4	3050434	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050334	JH/	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			104 %	71.5	-134	3050334	JH/	05-May-23	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
DRO >C10-C28*	226		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
EXT DRO >C28-C36	109		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			109 %	48.2	-134	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			130 %	49.1	-148	3050330	MS	04-May-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project:MESA B #25Reported:Project Number:03C201202709-May-23 14:34Project Manager:HADLIE GREENFax To:Fax To:									
				08 0.25 184-08 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	32.0		16.0	mg/kg	4	3050434	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050334	JH/	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050334	JH/	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			102 %	71.5	-134	3050334	JH/	05-May-23	8021B	
Petroleum Hydrocarbons by GG	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050330	MS	08-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050330	MS	08-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050330	MS	08-May-23	8015B	
Surrogate: 1-Chlorooctane			87.2 %	48.2	-134	3050330	MS	08-May-23	8015B	
Surrogate: 1-Chlorooctadecane			95.2 %	49.1	-148	3050330	MS	08-May-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705			Project Num Project Mana Fax	ger: HA[To:	2012027 DLIE GREEM	١		0	Reported: 9-May-23 14:	34	
				09 0.25 184-09 (Se							
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes	
			Cardina	l Laborat	ories						
<u>Inorganic Compounds</u> Chloride	80.0		16.0	mg/kg	4	3050434	AC	04-May-23	4500-Cl-B		
Volatile Organic Compounds	by EPA Method 8	021									
Benzene*	< 0.050		0.050	mg/kg	50	3050335	JH	05-May-23	8021B		
Toluene*	< 0.050		0.050	mg/kg	50	3050335	JH	05-May-23	8021B		
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050335	ЛН	05-May-23	8021B		
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050335	ЛН	05-May-23	8021B		
Total BTEX	< 0.300		0.300	mg/kg	50	3050335	ЛН	05-May-23	8021B		
Surrogate: 4-Bromofluorobenzene (PII	D)		105 %	71.5	-134	3050335	ЛН	05-May-23	8021B		
Petroleum Hydrocarbons by	GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050330	MS	04-May-23	8015B		
DRO >C10-C28*	881		10.0	mg/kg	1	3050330	MS	04-May-23	8015B		
EXT DRO >C28-C36	399		10.0	mg/kg	1	3050330	MS	04-May-23	8015B		
Surrogate: 1-Chlorooctane			125 %	48.2	-134	3050330	MS	04-May-23	8015B		
Surrogate: 1-Chlorooctadecane			142 %	49.1-148 3050330 MS 04-May-23 8015B							

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705			Project Num Project Mana Fax	ger: HA[To:	2012027 DLIE GREEM	N		0	Reported: 9-May-23 14:	34
				10 0.25 184-10 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
<u>Inorganic Compounds</u> Chloride	128		16.0	mg/kg	4	3050434	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050335	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050335	ЈН	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050335	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050335	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050335	ЛН	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			110 %	71.5	-134	3050335	ЛН	05-May-23	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
DRO >C10-C28*	474		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
EXT DRO >C28-C36	202		10.0	mg/kg	1	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			86.2 %	48.2	-134	3050330	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			107 %	49.1	-148	3050330	MS	04-May-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: Project Number: Project Manager: Fax To:		Reported: 09-May-23 14:34
--	--	--	------------------------------

Inorganic Compounds - Quality Control

Cardinal Laboratories

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3050433 - 1:4 DI Water										
Blank (3050433-BLK1)				Prepared &	Analyzed:	04-May-23	;			
Chloride	ND	16.0	mg/kg							
LCS (3050433-BS1)				Prepared &	Analyzed:	04-May-23	;			
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (3050433-BSD1)				Prepared &	Analyzed:	04-May-23	;			
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	
Batch 3050434 - 1:4 DI Water										
Blank (3050434-BLK1)				Prepared &	Analyzed:	04-May-23	;			
Chloride	ND	16.0	mg/kg							
LCS (3050434-BS1)				Prepared &	Analyzed:	04-May-23	;			
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (3050434-BSD1)				Prepared &	Analyzed:	04-May-23	;			
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705		Project Ni Project Ma	umber:	MESA B #25 03C2012027 HADLIE GRE	7				Reported: May-23 14	4:34
	Volatile Organic (-	•	A Method 8 boratories	8021 - Qu	ality Co	ntrol			
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3050334 - Volatiles										
Blank (3050334-BLK1)				Prepared: ()3-May-23	Analyzed: (05-May-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)	0.0514		mg/kg	0.0500		103	71.5-134			
LCS (3050334-BS1)				Prepared: ()3-May-23	Analyzed: (05-May-23			
Benzene	2.05	0.050	mg/kg	2.00		103	81.4-118			
Toluene	2.16	0.050	mg/kg	2.00		108	88.7-121			
Ethylbenzene	2.10	0.050	mg/kg	2.00		105	86.1-120			
m,p-Xylene	4.38	0.100	mg/kg	4.00		110	88.2-124			
o-Xylene	2.11	0.050	mg/kg	2.00		105	84.9-118			
Total Xylenes	6.49	0.150	mg/kg	6.00		108	87.3-122			
Surrogate: 4-Bromofluorobenzene (PID)	0.0513		mg/kg	0.0500		103	71.5-134			
LCS Dup (3050334-BSD1)				Prepared: ()3-May-23	Analyzed: (05-May-23			
Benzene	1.99	0.050	mg/kg	2.00		99.6	81.4-118	2.88	15.8	
Toluene	2.08	0.050	mg/kg	2.00		104	88.7-121	3.86	15.9	
Ethylbenzene	2.05	0.050	mg/kg	2.00		102	86.1-120	2.27	16	
m,p-Xylene	4.31	0.100	mg/kg	4.00		108	88.2-124	1.64	16.2	
p-Xylene	2.06	0.050	mg/kg	2.00		103	84.9-118	2.30	16.7	
Total Xylenes	6.37	0.150	mg/kg	6.00		106	87.3-122	1.85	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0505		mg/kg	0.0500		101	71.5-134			

Blank (3050335-BLK1) Prepared: 03-May-23 Analyzed: 05-May-23 Benzene ND 0.050 mg/kg ND 0.050 Toluene mg/kg ND Ethylbenzene 0.050 mg/kg Total Xylenes ND 0.150 mg/kg

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705		Project Nu Project Ma	umber:	MESA B #25 03C2012027 HADLIE GRI	7				Reported: May-23 14	1:34
	Volatile Organic (-	•	A Method 8 poratories	3021 - Qu	ality Co	ntrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3050335 - Volatiles										
Blank (3050335-BLK1)				Prepared: ()3-May-23	Analyzed:	05-May-23			
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0513		mg/kg	0.0500		103	71.5-134			
LCS (3050335-BS1)				Prepared: ()3-May-23	Analyzed:	05-May-23			
Benzene	1.88	0.050	mg/kg	2.00		93.8	81.4-118			
Toluene	1.92	0.050	mg/kg	2.00		96.0	88.7-121			
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	86.1-120			
m,p-Xylene	4.00	0.100	mg/kg	4.00		100	88.2-124			
o-Xylene	2.00	0.050	mg/kg	2.00		100	84.9-118			
Total Xylenes	6.00	0.150	mg/kg	6.00		100	87.3-122			
Surrogate: 4-Bromofluorobenzene (PID)	0.0527		mg/kg	0.0500		105	71.5-134			
LCS Dup (3050335-BSD1)				Prepared: ()3-May-23	Analyzed:	05-May-23			
Benzene	1.86	0.050	mg/kg	2.00		92.8	81.4-118	1.13	15.8	
Toluene	1.95	0.050	mg/kg	2.00		97.4	88.7-121	1.52	15.9	
Ethylbenzene	2.08	0.050	mg/kg	2.00		104	86.1-120	1.39	16	
m,p-Xylene	4.05	0.100	mg/kg	4.00		101	88.2-124	1.27	16.2	
o-Xylene	2.01	0.050	mg/kg	2.00		100	84.9-118	0.448	16.7	
Total Xylenes	6.06	0.150	mg/kg	6.00		101	87.3-122	0.999	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0546		mg/kg	0.0500		109	71.5-134			

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705		Project Nu Project Ma	umber: (Mesa B #25)3C2012027 Hadlie Gre	7				Reported: May-23 1	4:34
	Petroleum	·	·	GC FID - Q oratories	Quality C	ontrol				
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3050330 - General Prep - Organics										
Blank (3050330-BLK1)				Prepared: 0)3-May-23	Analyzed: (04-May-23			
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	51.7		mg/kg	49.6		104	48.2-134			
Surrogate: 1-Chlorooctadecane	58.4		mg/kg	50.0		117	49.1 - 148			

LCS (3050330-BS1)				Prepared: 03-Ma	ay-23 Analyzed:	04-May-23			
GRO C6-C10	192	10.0	mg/kg	200	96.1	78.5-124			
DRO >C10-C28	192	10.0	mg/kg	200	96.0	72.5-126			
Total TPH C6-C28	384	10.0	mg/kg	400	96.0	77.6-123			
Surrogate: 1-Chlorooctane	48.0		mg/kg	49.6	96.9	48.2-134			
Surrogate: 1-Chlorooctadecane	50.2		mg/kg	50.0	100	49.1-148			
LCS Dup (3050330-BSD1)				Prepared: 03-Ma	ay-23 Analyzed:	04-May-23			
GRO C6-C10	234	10.0	mg/kg	200	117	78.5-124	19.5	17.7	QR-04

mg/kg

mg/kg

mg/kg

mg/kg

200

400

49.6

50.0

115

116

128

130

72.5-126

77.6-123

48.2-134

49.1-148

18.4

19.0

21

18.5

QR-04

10.0

10.0

231

465

63.4

65.0

Cardinal Laboratories

DRO >C10-C28

Total TPH C6-C28

Surrogate: 1-Chlorooctane

Surrogate: 1-Chlorooctadecane

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-04	The RPD for the BS/BSD was outside of historical limits.
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

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

AM

Received by OCD: 4/16/2024 9:54:01



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	Ensolum, LLC							T		B	ILL	. 70					and a particular	ANAL	YSIS	RE	QUE	ST			
Project Manage		ren						P.	0. #:		-	1	Control Manhana	T	T	T			T			T	T	T	
Address: 601	N. Marienfeld St. STE	400						Co	mpa	iny:	R	TA	Dit	1											11
City: Midland		State: TX	Zi	p:	7970	1		At	tn: ł	Sel	in	Jo	ner	1	1									1	11
Phone #: 4	32557389	Fax #:						Ad	Idres	s:10	DG	SR	ner cos St												
Project #:034	2012027	Project Owne	r: l	37,	Á,	Di	/		ty:M		la			1											
Project Name: (0	F25						1	ate:	TX	Zig		9701	1									1		
Project Location		5-103	6	DI	177	pe	5		one	#.6	13	231	1220	2		5									
Sampler Name:		GINOPOL						-	x #:				hand	1		E									
FOR LAB USE ONLY		I	Г			MAT	RIX	-	-	SERV	/	SAM	PLING	1		4									
			P (G)RAB OR (C)OMP.	RS	GROUNDWATER	Y I				1	Y			V		E&C									
Lab I.D.	Sample I.D.	Sample Depth (feet)	OR (# CONTAINERS	GROUNDWATE				SE	G					I	2									
		1.000	WAB	TNC	NNC		2	ER	D/BA	OTHER :				E	2	F									
1232184			Ō	0 #	GRO	SOIL	OIL	OTHER :	ACID/BASE:	OTHER	1	DATE	TIME	A	C	\bigcirc									
1	5501	0.251	Gr	1		X				K		2/23		×	×	\times									\square
3	SSO 2		4			1	_			1		1	10:30	1	1	1									
	SS0 3 SS04		-	111			-			11-	1	-	10:40												
4	5505		4	$\ $	-		_		-	11	1		10:50	1				_							
-2	<u> <506</u>		H	$\left \right $	-	11	+		-		-	1	11:00		1				_	_					
le	5500			*	+	-	-	+	-	-	-	-	11:10	~	-	~		_		_					\square
				\vdash	+	+	+	+	+	+	-						-+	\rightarrow			_				\square
				H	+	++	+	+	-	+	-								_	_	_				\square
				H	+	++	+	\square	+	-	F				-					-+	-				\square
LEASE NOTE: Liability and	Domages. Cardinal's liability and clier	t's exclusive remedy for an	iy claim	arising	whethe	r based in	contrac	l or tort, i	shell be	limited t	to the ar	nount paid	by the client for t	the								_	<u> </u>		
ervice. In no event shall Gar	g those for negligence and any other c idinal be liable for incidental or conseq a out of or related to the performance of	uental damages, including	vinthout	t Ranitatie	on busir	tess intere	unline:	Inne of a	min me L	one of no	office labor	stand has al	and the method line of		de										
Relinquished By		Date	Re	ceive	d B	/:	CI CIUN	II Case:	1 9900 1	iny of the	c above		Verbal Res	sult-	O Yes		No A	dd'l Ph	ione #:			-			_
DN		515/25 Time: 1215		8	0	00	10	:0	m	0	0 /	1	All Results	are en	nailed.	Please	provid	e Email	addres	ss: h	gr	leh	1De	usolu	in.te
Relinquished By:		Date:	Re	ceive	ad B	00	IK	10	ĴΥ	e	\sim	T	REMARKS		solum.c	otth- (C)	LIAU	(noro	NEUC	msoc	LIN	60	m		
		Time:							50		C		- ALINGTING												
B.B. 18. 18					_							_													
Delivered By: (Cir		erved Temp. °C	.4	è	Co	nple C ol In	tact		C	HECK (Initi		Y:	Tumaround	1 Time	-	Standa	ard	B	acteria ol Inta						
Sampler - UPS - B	Sus - Other: Cor	rected Temp. "0	.8	2	E	Yes.	Ye	5		5	X		Thermomete Correction F		113	- second			Yes No	Yes			Temp.		

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

Company Name:	(575) 393-2326 F/						T		E	BIL.	LTO					A	NAL	ISIS	REG	JUE	51	- 1		-
Project Manager	Ensolum, LLC Hadlie GN	eph					F	.0. #	ł	_														
Address: 601 1	N. Marienfeld St. STE	400					c	omp	any:	E	STA	Oil												
City: Midland		State: TX	Zip:	79	701		4	ttn:	Ke	Viu	1 Jon	es -												
Phone #: 4	32557889	5Fax #:	0	-			1	ddre	ss:	D	1 Stee	205 ST												
Project #:03C	2012027	Project Owner	: 5	1A	0	i(0	ity:	1)	lle	ud	10												
Project Name: /	Yesa Bŧ	F25					\$	state	11	×z	ip: 79	1 FUI			5									
Project Location	32.0639	5-103	.60	24	78	PS	F	hon	e #: 4	4	52 712	1203			A									1
Sampler Name:	Dmitry No.	KOLNOVOV				_		ax #			-		4		9									
FOR LAB USE ONLY					1	MATR	IX	PF	ESEF	<u>۷۱</u>	SAM	PLING			2									
			(G)RAB OR (C)OMP	ERS	WASTEWATER				1	1			X	J	0									
Lab I.D.	Sample I.D.	Sample Depth (feet)	Я	# CONTAINERS	WASTEWATER		ш	OTHER : ACID/BASE	OOL	2			F	Q	I									
			RAB	LNO:	ASTE	SOIL	SLUDGE	ACID/BAS	ICE / COOL	OTHER	DATE	TIME	00	-	U									
#232184		1.1.5/	0	# 0	5 N	SOI N	5 0	OV	2	0	DATE 5/2/23			~					-					
7	SSO7	0.25'	100	1	-	7	+	+	1	ł	1414	11:20	1	1	n									
890	5508				+	H		+		+		11:30		tt										
9	5505		\downarrow	t	-	V		+	1	1	1	1150	1	V	V									_
10	25/12		Ľ		-	T																		-
													-	-	-						-			-
													-	-	-		-	-						-
								+					+		-		_	_	-	-	-			
				\square	_	\square		+					+	+	+				-		-			
	nd Damages. Cardinal's liability and				whether	based in	contract o	r tort, sh	all be lim	ited to	the amount pa	id by the client f	or the											_
analyses. All claims includi	ing those for negligence and any oth	er cause whatsoever shall be	Qeennes	d Real Ball	no brains	one interr	untions In	es of us	e, or loss	of ore	fits incurred by	client, its subsid	iaries,	able										
affiliates or successors arisi	ing out of or related to the performan	nce of services hereunder by (All Clines	, regard	ed By	-	ch claim i	based	apon any	of the	above stated r	Verbal R	Result:	DY	es 🗆	No	Add'l F	Phone	#:	40	000	1.600	. calu	<i>n</i>
Relinquished B	y:	513123	-	5	20	N	10	in	h	1	IA	Verbal R All Resu BJenn	Its are	emaile	J. Pleas	e provi	de Ema O h Di	DIA	ess:	ity	na	Im	HJOLNI	11.0
IN		111111111111111111111111111111111111111	_	C	X	a	TR	14	JV		2	REMAR		11301014		101								
Relinquished B	у:	Date:	Re	ceiv	ed By							-												
		Time:													Dia	davd	NA.	Dacto	ria (or	h) Sa	nole Co	ondition		_
Delivered By: (C	Circle One)	Observed Temp. "C Corrected Temp. "G	1.4	ż			Conditi	n	CH		ED BY: als)	Turnaro			Rusi	dard	No.	Cool	Intact	0	bserve	d Temp	°C	
	Bus - Other:		- 0	1 -	50	100	Intact (initials)				1. 11-	Thermom	ator ID	#113				L Ye		S	orrecte			

PORM-000 R 3.2 10/07/2

Received by OCD: 4/16/2024 9:54:01 AM

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



July 25, 2023

HADLIE GREEN ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD, NM 88220

RE: MESA B #25

Enclosed are the results of analyses for samples received by the laboratory on 07/19/23 14:15.

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

Accreditation applies to public drinking water matrices.

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. Keine

Celey D. Keene Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:	ł	
Received:	07/19/2023		Sampling Date:	07/17/2023
Reported:	07/25/2023		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA COUNTY,	, NM		

Sample ID: FS 01 @ 1' (H233749-01)

BTEX 8021B	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.953	
Toluene*	<0.050	0.050	07/23/2023	ND	1.94	96.8	2.00	0.442	
Ethylbenzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.924	
Total Xylenes*	<0.150	0.150	07/23/2023	ND	6.09	102	6.00	0.851	
Total BTEX	<0.300	0.300	07/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	07/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2023	ND	195	97.4	200	5.27	
DRO >C10-C28*	91.8	10.0	07/21/2023	ND	206	103	200	7.88	
EXT DRO >C28-C36	61.6	10.0	07/21/2023	ND					
Surrogate: 1-Chlorooctane	95.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	108	% 49.1-14	8						

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 and any other cause whatscever 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 damages, including whose 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 damages, including whose share there applied by the services arise of the services hereunder by Cardinal, regardless of whether such 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.

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	07/19/2023		Sampling Date:	07/17/2023
Reported:	07/25/2023		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA COUNTY,	NM		

Sample ID: FS 02 @ 1' (H233749-02)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.953	
Toluene*	<0.050	0.050	07/23/2023	ND	1.94	96.8	2.00	0.442	
Ethylbenzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.924	
Total Xylenes*	<0.150	0.150	07/23/2023	ND	6.09	102	6.00	0.851	
Total BTEX	<0.300	0.300	07/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1410	16.0	07/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2023	ND	195	97.4	200	5.27	
DRO >C10-C28*	34.5	10.0	07/21/2023	ND	206	103	200	7.88	
EXT DRO >C28-C36	13.9	10.0	07/21/2023	ND					
Surrogate: 1-Chlorooctane	103 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	111 9	6 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	07/19/2023		Sampling Date:	07/17/2023
Reported:	07/25/2023		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA COUNTY,	NM		

Sample ID: FS 03 @ 1' (H233749-03)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.953	
Toluene*	<0.050	0.050	07/23/2023	ND	1.94	96.8	2.00	0.442	
Ethylbenzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.924	
Total Xylenes*	<0.150	0.150	07/23/2023	ND	6.09	102	6.00	0.851	
Total BTEX	<0.300	0.300	07/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	07/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2023	ND	195	97.4	200	5.27	
DRO >C10-C28*	<10.0	10.0	07/21/2023	ND	206	103	200	7.88	
EXT DRO >C28-C36	<10.0	10.0	07/21/2023	ND					
Surrogate: 1-Chlorooctane	90.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	104 9	% 49.1-14	8						

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 and any other cause whatscever 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 damages, including whose 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 damages, including whose share there applied by the services arise of the services hereunder by Cardinal, regardless of whether such 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.

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	07/19/2023		Sampling Date:	07/17/2023
Reported:	07/25/2023		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA COUNTY,	NM		

Sample ID: FS 04 @ 1' (H233749-04)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.953	
Toluene*	<0.050	0.050	07/23/2023	ND	1.94	96.8	2.00	0.442	
Ethylbenzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.924	
Total Xylenes*	<0.150	0.150	07/23/2023	ND	6.09	102	6.00	0.851	
Total BTEX	<0.300	0.300	07/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	07/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2023	ND	195	97.4	200	5.27	
DRO >C10-C28*	<10.0	10.0	07/21/2023	ND	206	103	200	7.88	
EXT DRO >C28-C36	<10.0	10.0	07/21/2023	ND					
Surrogate: 1-Chlorooctane	89.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	102 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	07/19/2023		Sampling Date:	07/17/2023
Reported:	07/25/2023		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA COUNTY,	NM		

Sample ID: FS 05 @ 1' (H233749-05)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.953	
Toluene*	<0.050	0.050	07/23/2023	ND	1.94	96.8	2.00	0.442	
Ethylbenzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.924	
Total Xylenes*	<0.150	0.150	07/23/2023	ND	6.09	102	6.00	0.851	
Total BTEX	<0.300	0.300	07/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	07/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2023	ND	195	97.4	200	5.27	
DRO >C10-C28*	<10.0	10.0	07/21/2023	ND	206	103	200	7.88	
EXT DRO >C28-C36	<10.0	10.0	07/21/2023	ND					
Surrogate: 1-Chlorooctane	96.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	111 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	07/19/2023		Sampling Date:	07/17/2023
Reported:	07/25/2023		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA COUNTY,	NM		

Sample ID: FS 06 @ 1' (H233749-06)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.953	
Toluene*	<0.050	0.050	07/23/2023	ND	1.94	96.8	2.00	0.442	
Ethylbenzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.924	
Total Xylenes*	<0.150	0.150	07/23/2023	ND	6.09	102	6.00	0.851	
Total BTEX	<0.300	0.300	07/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1460	16.0	07/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2023	ND	195	97.4	200	5.27	
DRO >C10-C28*	<10.0	10.0	07/21/2023	ND	206	103	200	7.88	
EXT DRO >C28-C36	<10.0	10.0	07/21/2023	ND					
Surrogate: 1-Chlorooctane	94.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	108 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	07/19/2023		Sampling Date:	07/17/2023
Reported:	07/25/2023		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA COUNTY,	NM		

Sample ID: FS 07 @ 1' (H233749-07)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.953	
Toluene*	<0.050	0.050	07/23/2023	ND	1.94	96.8	2.00	0.442	
Ethylbenzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.924	
Total Xylenes*	<0.150	0.150	07/23/2023	ND	6.09	102	6.00	0.851	
Total BTEX	<0.300	0.300	07/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	07/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	′kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2023	ND	195	97.4	200	5.27	
DRO >C10-C28*	<10.0	10.0	07/21/2023	ND	206	103	200	7.88	
EXT DRO >C28-C36	<10.0	10.0	07/21/2023	ND					
Surrogate: 1-Chlorooctane	95.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	07/19/2023		Sampling Date:	07/17/2023
Reported:	07/25/2023		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA - LEA COUNTY,	NM		

Sample ID: FS 08 @ 1' (H233749-08)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.953	
Toluene*	<0.050	0.050	07/23/2023	ND	1.94	96.8	2.00	0.442	
Ethylbenzene*	<0.050	0.050	07/23/2023	ND	2.01	100	2.00	0.924	
Total Xylenes*	<0.150	0.150	07/23/2023	ND	6.09	102	6.00	0.851	
Total BTEX	<0.300	0.300	07/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	07/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2023	ND	195	97.4	200	5.27	
DRO >C10-C28*	<10.0	10.0	07/21/2023	ND	206	103	200	7.88	
EXT DRO >C28-C36	11.1	10.0	07/21/2023	ND					
Surrogate: 1-Chlorooctane	92.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	102 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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 and any other cause whatscever 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 damages, including whose 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 damages, including whose share there applied by the services arise of the services hereunder by Cardinal, regardless of whether such 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. Keine

Celey D. Keene, Lab Director/Quality Manager

M	CARDINAL
021	Laboratories

Page 66 of 141

Com

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 11 of 11

101 Ea	st Marland	i, Hobbs	ALMAN .	88240
(575)	393-2326	FAX (57	1 30	2.3/70

Project Manag	er: Had lie Gar	een		al sin and	70	<u>1</u>	ANAL	YSIS REQUEST
Address: 3/2	- Notional	Parks Hwy		P.O. #		ITT	IIII	TOID REQUEST
Renvi (a lef a)			Company: BT	AOIL				
Phone #: 43;	2 557 8895	Fax #	1 mp: 00/20	Atta: Kelta Address: 104	Beaird			
Project #: 03	C2012027	Drala et O	non BIA	Address: 104	5 Pocas st.			
Project Name:	Mesa B H	2.5	NOL DIA	City: / idlan	9			
Project Locatio	n;			State: TX Zip:	79701			
Sampler Name:	Conner VI	ritmen		Phone #:				
FOR LAB USE ONLY		I	MATRIX	Fax #:				
	The second second	1		FRESERV.	SAMPLING			
Lab I.D.	Sample I.D.	Depth	(C)O			4		
	oquibia I'D'	(feet)	 P (G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER WASTEWATER SOIL OIL SLUDGE 	19		PH TEX hloride		
4233749			RAB OUN STEL	ER :		PH Llar		
1	Fsol			OTHER : ACID/BASE: ICE / COOL OTHER :	TE TIME	160		
Z	FSez		CI	1 7/17/				
3	F503				118			
- 4	FS04		┠┼┠╎┠╶┼╶┼╎╴┼╶┤		115			
5	F505	1			120			
	F506				125			
<u> </u>	F507				130			
	FS08				135	+++++		
SE NOTE: Liability and Da	mages. Cardinal's Subility and clier	to exclusive remedy for any	cloim arising whicher based in contract or bo meet waited unless scale in willing and reco		-ar			
e. In no event shell Cardina to er successors aritina out	I be finite for incidental or conveq	iune vilataaver shall be dee Jental damagen, including sil	chim artising whicher based in contract or to meet valkoot unless rande in willage and reco- hout limitation, business filteraiptuse, tons o tail, respondence of vituelher such closin is lass	It ahali he limited to the emount shed by Cardinal within 30 days o	nid by the chest for the			
and monton my,	PLANNIN WORLDING	Dates	meet vanued unless rando in unling and read hout limitation, business interruptions, loss o intel. remarking of vanisher such claim is loss RECOIVED BY:	fuse, or loss of profils incurred b ad upon any of the about stated	r client, its cubristinies,	NALOS		
Allo		7-19.23 Time:	The second secon	MAIT	Verhal Receilt-	Ves DW	o Add'I Phone	
inquished By:		Time: 415	Allara 1	Ida Hol	f is	emotion Ligszel	provide Email addr	966:
			leceived By:	men	REMARKS:	OEnsolum	1. Com	
ivered By: (Circle)		Time:	5	-				
pler - UPS - Bus		rvas Tamp. "C	7 Sample Condition Cool Intact	CHECKED BY:	Turnaround Tim	In: Phone		
TORM-OUD R 3.2		oses Tomp. "C	Ves Ves	(Initials)	and the states of	Ruch	Cool In	a (only) Sample Condition
000 1 32	1007/21	+ Cardinal cano	of accept verbal changes		Correction Factor	115 #140 05°C TO. 7/		tact Observed Temp. °C Yes No Corrected Temp. °C
			on accept verbal changes	Please email char	to color he		Tom CI NOT	Live Corrected Temp. °C



July 28, 2023

HADLIE GREEN ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD, NM 88220

RE: MESA B #25

Enclosed are the results of analyses for samples received by the laboratory on 07/20/23 12:13.

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/qa/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)

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. Keine

Celey D. Keene Lab Director/Quality Manager



ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: Project Number: Project Manager: Fax To:		Reported: 28-Jul-23 11:28
--	--	--	------------------------------

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS 09A 4'	H233783-01	Soil	17-Jul-23 10:50	20-Jul-23 12:13
SS 10A 4'	H233783-02	Soil	17-Jul-23 10:55	20-Jul-23 12:13
SS 11 .25	H233783-03	Soil	17-Jul-23 11:00	20-Jul-23 12:13
SS 11A 4'	H233783-04	Soil	17-Jul-23 12:30	20-Jul-23 12:13
SS 12 .25	H233783-05	Soil	17-Jul-23 12:35	20-Jul-23 12:13
SS 12A 4'	H233783-06	Soil	17-Jul-23 12:55	20-Jul-23 12:13
SS 07A 4'	H233783-07	Soil	17-Jul-23 11:10	20-Jul-23 12:13

07/28/23 - Client changed the sample depths on several samples (see COC). This is the revised report and will replace the one sent on 07/26/23.

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B #25 Reported: Project Number: 03C2012027 28-Jul-23 11:28 Project Manager: HADLIE GREEN Fax To:								28	
				09A 4' 783-01 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	144		16.0	mg/kg	4	3072511	AC	25-Jul-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			102 %	71.5	-134	3072405	MS	25-Jul-23	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3072305	MS	24-Jul-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3072305	MS	24-Jul-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3072305	MS	24-Jul-23	8015B	
Surrogate: 1-Chlorooctane			94.1 %	48.2	-134	3072305	MS	24-Jul-23	8015B	
Surrogate: 1-Chlorooctadecane			99.5 %	49.1	-148	3072305	MS	24-Jul-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B #25 Project Number: 03C2012027 Project Manager: HADLIE GREEN Fax To:								Reported: 28-Jul-23 11:28		
				5 10A 4' 783-02 (Se	oil)						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes	
			Cardina	l Laborat	tories						
<u>Inorganic Compounds</u> Chloride	176		16.0	mg/kg	4	3072511	AC	25-Jul-23	4500-Cl-B		
Volatile Organic Compounds by	EPA Method	8021									
Benzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B		
Toluene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B		
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B		
Total Xylenes*	< 0.150		0.150	mg/kg	50	3072405	MS	25-Jul-23	8021B		
Total BTEX	< 0.300		0.300	mg/kg	50	3072405	MS	25-Jul-23	8021B		
Surrogate: 4-Bromofluorobenzene (PID)			101 %	71.5	-134	3072405	MS	25-Jul-23	8021B		
Petroleum Hydrocarbons by GC	FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3072305	MS	24-Jul-23	8015B		
DRO >C10-C28*	16.4		10.0	mg/kg	1	3072305	MS	24-Jul-23	8015B		
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3072305	MS	24-Jul-23	8015B		
Surrogate: 1-Chlorooctane			90.6 %	48.2	-134	3072305	MS	24-Jul-23	8015B		
Surrogate: 1-Chlorooctadecane			96.4 %	49.1	-148	3072305	MS	24-Jul-23	8015B		

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MESA B #25 Project Number: 03C2012027 Project Manager: HADLIE GREEN Fax To:								Reported: 28-Jul-23 11:28	
				5 11 .25 783-03 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds Chloride	32.0		16.0	mg/kg	4	3072511	AC	25-Jul-23	4500-Cl-B	
Volatile Organic Compounds by I		8021								
Benzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			102 %	71.5	-134	3072405	MS	25-Jul-23	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B	
Surrogate: 1-Chlorooctane			84.6 %	48.2	-134	3072305	MS	25-Jul-23	8015B	
Surrogate: 1-Chlorooctadecane			88.0 %	49.1	-148	3072305	MS	25-Jul-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220		Project: MESA B #25 Project Number: 03C2012027 Project Manager: HADLIE GREEN Fax To:							Reported: 28-Jul-23 11:28		
				5 11A 4' 783-04 (Se	oil)						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes	
			Cardina	l Laborat	tories						
<u>Inorganic Compounds</u> Chloride	32.0		16.0	mg/kg	4	3072511	AC	25-Jul-23	4500-Cl-B		
Volatile Organic Compounds by	EPA Method	8021									
Benzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B		
Toluene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B		
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B		
Total Xylenes*	< 0.150		0.150	mg/kg	50	3072405	MS	25-Jul-23	8021B		
Total BTEX	< 0.300		0.300	mg/kg	50	3072405	MS	25-Jul-23	8021B		
Surrogate: 4-Bromofluorobenzene (PID)			102 %	71.5	-134	3072405	MS	25-Jul-23	8021B		
Petroleum Hydrocarbons by GC	FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B		
DRO >C10-C28*	31.6		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B		
EXT DRO >C28-C36	12.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B		
Surrogate: 1-Chlorooctane			81.8 %	48.2	-134	3072305	MS	25-Jul-23	8015B		
Surrogate: 1-Chlorooctadecane			86.0 %	49.1	-148	3072305	MS	25-Jul-23	8015B		

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Volatile Organic Compounds by EPA Method 8021 Benzene* <0.050 0.050 mg/kg 50 3072405 MS 25-Jul-23 8021B Toluene* <0.050 0.050 mg/kg 50 3072405 MS 25-Jul-23 8021B Ethylbenzene* <0.050 0.050 mg/kg 50 3072405 MS 25-Jul-23 8021B Total Xylenes* <0.150 0.150 mg/kg 50 3072405 MS 25-Jul-23 8021B Total Xylenes* <0.150 0.150 mg/kg 50 3072405 MS 25-Jul-23 8021B Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134 3072405 MS 25-Jul-23 8021B Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134 3072405 MS 25-Jul-23 8021B GRO C6-C10* <10.0 10.0 mg/kg 1 3072305 MS 25-Jul-23 8015B		NOCENTProject Number:03C201202728-Jul-23 11:28122 NATIONAL PARKS HWYProject Number:03C201202728-Jul-23 11:28ARLSBAD NM, 88220Project Manager:HADLIE GREEN														
					oil)											
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes						
			Cardina	l Laborat	ories											
<u>Inorganic Compounds</u> Chloride	48.0		16.0	mg/kg	4	3072511	AC	25-Jul-23	4500-Cl-B							
Volatile Organic Compounds by	EPA Method	8021														
Benzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B							
Toluene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B							
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B							
Total Xylenes*	< 0.150		0.150	mg/kg	50	3072405	MS	25-Jul-23	8021B							
Total BTEX	< 0.300		0.300	mg/kg	50	3072405	MS	25-Jul-23	8021B							
Surrogate: 4-Bromofluorobenzene (PID)			102 %	71.5	-134	3072405	MS	25-Jul-23	8021B							
Petroleum Hydrocarbons by GC	FID															
GRO C6-C10*	<10.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B							
DRO >C10-C28*	19.1		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B							
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B							
Surrogate: 1-Chlorooctane			87.5 %	48.2	-134	3072305	MS	25-Jul-23	8015B							
Surrogate: 1-Chlorooctadecane			92.5 %	49.1	-148	3072305	MS	25-Jul-23	8015B							

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220			Project Num Project Mana		2012027	1			Reported: 28-Jul-23 11:2	28
				5 12A 4' 783-06 (So	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
<u>Inorganic Compounds</u> Chloride	32.0		16.0	mg/kg	4	3072511	AC	25-Jul-23	4500-Cl-B	
Volatile Organic Compounds by l	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3072405	MS	25-Jul-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			103 %	71.5	-134	3072405	MS	25-Jul-23	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B	
DRO >C10-C28*	27.2		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B	
Surrogate: 1-Chlorooctane			85.2 %	48.2	-134	3072305	MS	25-Jul-23	8015B	
Surrogate: 1-Chlorooctadecane			90.9 %	49.1	-148	3072305	MS	25-Jul-23	8015B	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220		$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Project Number: 03C2012027 28-Jul-23 11:28 Project Manager: HADLIE GREEN Fax To:												
					oil)										
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes					
			Cardina	l Laborat	tories										
<u>Inorganic Compounds</u> Chloride	32.0		16.0	mg/kg	4	3072511	AC	25-Jul-23	4500-Cl-B						
Volatile Organic Compounds by l	EPA Method	8021													
Benzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B						
Toluene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B						
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3072405	MS	25-Jul-23	8021B						
Total Xylenes*	< 0.150		0.150	mg/kg	50	3072405	MS	25-Jul-23	8021B						
Total BTEX	< 0.300		0.300	mg/kg	50	3072405	MS	25-Jul-23	8021B						
Surrogate: 4-Bromofluorobenzene (PID)			102 %	71.5	-134	3072405	MS	25-Jul-23	8021B						
Petroleum Hydrocarbons by GC	FID														
GRO C6-C10*	<10.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B						
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B						
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3072305	MS	25-Jul-23	8015B						
Surrogate: 1-Chlorooctane			88.8 %	48.2	-134	3072305	MS	25-Jul-23	8015B						
Surrogate: 1-Chlorooctadecane			93.2 %	49.1	-148	3072305	MS	25-Jul-23	8015B						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUMProject:MESA B #253122 NATIONAL PARKS HWYProject Number:03C2012027CARLSBAD NM, 88220Project Manager:HADLIE GREENFax To:	Reported: 28-Jul-23 11:28
--	------------------------------

Inorganic Compounds - Quality Control

		Cardiı	nal Lab	oratories						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3072511 - 1:4 DI Water										
Blank (3072511-BLK1)				Prepared &	Analyzed:	25-Jul-23				
Chloride	ND	16.0	mg/kg							
LCS (3072511-BS1)				Prepared &	z Analyzed:	25-Jul-23				
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (3072511-BSD1)				Prepared &	Analyzed:	25-Jul-23				
Chloride	416	16.0	mg/kg	400		104	80-120	3.77	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 ar any other cause whitstoewer 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 su claim is based to reproduced except in full with written approval of Cardinal Loaratories.

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: Project Number: Project Manager: Fax To:		Reported: 28-Jul-23 11:28
--	--	--	------------------------------

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Kesuit	Liinit	Units	Level	Result	70KEC	Limits	KPD	Liinit	Indies
Batch 3072405 - Volatiles										
Blank (3072405-BLK1)				Prepared: 2	24-Jul-23 A	nalyzed: 25	-Jul-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 (3072405-BS1)				Prepared: 2	24-Jul-23 A	nalyzed: 25	-Jul-23			
Benzene	2.10	0.050	mg/kg	2.00		105	82.8-130			
Toluene	2.03	0.050	mg/kg	2.00		102	86-128			
Ethylbenzene	2.09	0.050	mg/kg	2.00		104	85.9-128			
m,p-Xylene	4.27	0.100	mg/kg	4.00		107	89-129			
o-Xylene	2.06	0.050	mg/kg	2.00		103	86.1-125			
Total Xylenes	6.33	0.150	mg/kg	6.00		106	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0516		mg/kg	0.0500		103	71.5-134			
LCS Dup (3072405-BSD1)				Prepared: 2	24-Jul-23 A	nalyzed: 25	-Jul-23			
Benzene	2.06	0.050	mg/kg	2.00		103	82.8-130	1.88	15.8	
Toluene	1.97	0.050	mg/kg	2.00		98.4	86-128	3.20	15.9	
Ethylbenzene	2.05	0.050	mg/kg	2.00		102	85.9-128	1.96	16	
m,p-Xylene	4.16	0.100	mg/kg	4.00		104	89-129	2.70	16.2	
o-Xylene	2.01	0.050	mg/kg	2.00		101	86.1-125	2.48	16.7	
Total Xylenes	6.17	0.150	mg/kg	6.00		103	88.2-128	2.63	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0512		mg/kg	0.0500		102	71.5-134			

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: Project Number: Project Manager: Fax To:		Reported: 28-Jul-23 11:28
--	--	--	------------------------------

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3072305 - General Prep - Organics										
Blank (3072305-BLK1)				Prepared: 2	23-Jul-23 A	nalyzed: 24	-Jul-23			
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	49.0		mg/kg	50.0		98.0	48.2-134			
Surrogate: 1-Chlorooctadecane	52.1		mg/kg	50.0		104	49.1-148			
LCS (3072305-BS1)				Prepared: 2	23-Jul-23 A	nalyzed: 24	-Jul-23			
GRO C6-C10	193	10.0	mg/kg	200		96.5	66.4-123			
DRO >C10-C28	196	10.0	mg/kg	200		98.2	66.5-118			
Total TPH C6-C28	389	10.0	mg/kg	400		97.3	77.6-123			
Surrogate: 1-Chlorooctane	56.7		mg/kg	50.0		113	48.2-134			
Surrogate: 1-Chlorooctadecane	64.0		mg/kg	50.0		128	49.1-148			
LCS Dup (3072305-BSD1)				Prepared: 2	23-Jul-23 A	nalyzed: 24	-Jul-23			
GRO C6-C10	188	10.0	mg/kg	200		94.2	66.4-123	2.42	17.7	
DRO >C10-C28	203	10.0	mg/kg	200		101	66.5-118	3.16	21	
Total TPH C6-C28	391	10.0	mg/kg	400		97.8	77.6-123	0.435	18.5	
Surrogate: 1-Chlorooctane	56.1		mg/kg	50.0		112	48.2-134			
Surrogate: 1-Chlorooctadecane	57.0		mg/kg	50.0		114	49.1-148			

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 ar any other cause whitstoewer 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 su claim is based to reproduced except in full with written approval of Cardinal Loaratories.

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

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

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Page 80 of 141

Received by OCD: 4/16/2024 9:54:01 AM

In.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 14 of 14

101	East	Marland	Hobbs.	NM	88244
		90 22 2990			

(575) 393-2326 FAX (575) 393-2476

Company nar	ne: Ensolum, LLC						-		T	1.	an.	B	ILL.	70	A ALASSA	161		-	-		6.0.1	ALM	010	-		-			
Project Manag	ger: Hadlie Garas	Can l							1	P.O.			-	-	Automatic and	T	T	-		-	AN	ALY	515	RE	QUE	ST	-	_	_
Address: 314	ger: Hallie Grad	rks Histnay						1		Com	nam	·	BTA	AC	11	-													
City: Cor Isl	ad.	State: M	MZ	lip:	282	10	2		_				Sec. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		ird	-							1	1			1	1	
	2 557 8895	Fax #:			0.00	-			-ľ,	dda	110	10	n u c	Ue	icces St								1			1		1	1
Project #: 03	C2012027	Project Own	ner:				-	-	ľ	-the	M	11	1 3	<u>+ [</u>	ccos st	4										-			
Project Name:	Mesa B#25					-			_			-	Zip:	70	7-1	-	1											1	
Project Locatio												~	Zip:	17	101	-	1				1		1						1
Sampler Name	: Connartiti	Imen					-		-	hon		-	-			-				1.	1			1				1	
FOR LAB USE ONLY	1	T	T	T	T	1	MAT	RIX	5	ax #	ESE	RVI	-	SAM	LING	-	1	1				1	1					1	
Lab I.D.		Depth (feet)	(G)RAB OR (C)OMP.	- # CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	SLUDGE	DTHER :	T		1	DA		TIME	TPH	BTEV	VICV	Chloride										
	5509A	.24'	G	I		-	Ĩ	1	1	A	T	4	7/17/		1050	-	+-	+	-		-	-	+	+	+	_	_		1
2	SSIDA	.25	1	1			T	1	T		++	+	1		1055	+	+	+	$+ \parallel$		-	-	-	+	+				
3	5511	.25		1			T	T			T	1	1	-	1100	+	+	+		-	-	-	-	+	+	_			
- 9	SSILA	4		1							T	t	1	1	1230	\vdash	+	+			-	1	+	+	+	-	-	-	
- 5	5512	.25	1	1							T	T	1		1235		+	+		-		-	-	+	+	-+	_		
4	SSIZA	4		1							T	T	1	-	1255			$^{+}$		-		-	-	+	-	-+	-	-	
- /	SSG7A	7854'	1	1							T	T	T		1110		+	t			-	-	-	+	+	-		-	
					-	+	1	-	-	-	-	T				-		+	-	-		-	-	+	+	-+	-	-	\square
					1	+	+		-		+	F		-			5	+		-		-		+	-	-			
ASE NOTE: Liability and	Damages, Cardinal's liability and o	finals make in provide the				1						Г						t	4	-			-	+	+	=			
	Damages, Cardinal's liubility and o litote for negligasce and any othe diral be liable for incidential or cons																-	-	-		-		-	-	1	-	_	-	
linguished By:	out of or related to the performanc	conferences hereunder by C Date: 7/00/23 Time: 13/3 Date:	Rec	eive	ed B	nheihe V:	r mich (cloin iz	based	Lupon i	any of B	he ab	per state	d reaso	the outsidiaries and otherwise erbal Results	are en	D Ye	. Pl		rovid	e Ema	ill addr	ess:		-		-	-	F
B		Time:				y.							0	R	Tharks:	us	to	m	er	rec	que	iste	0	T	reg	541	ne	hau	all
npler - UPS - Bu	us - Other: C	as erved Tamp. °C	3.9	2	Co	lo		dition	n		IECK (Init			Tu	maround	Time:	0	Sta	Indan	100		Bacteri	a (on	ly) Sa	mple bserv	Cond	ition	40	1

ecardin osnm.com



January 19, 2024

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: MESA B #25

Enclosed are the results of analyses for samples received by the laboratory on 01/16/24 14:51.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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. Keine

Celey D. Keene Lab Director/Quality Manager



		ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:		
Received:	01/16/2024		Sampling Date:	01/16/2024
Reported:	01/19/2024		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.06395,-103.	604785		

Sample ID: FS 12 1' (H240186-01)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	01/17/2024	ND	2.24	112	2.00	0.503	
Toluene*	<0.050	0.050	01/17/2024	ND	2.30	115	2.00	4.81	
Ethylbenzene*	<0.050	0.050	01/17/2024	ND	2.40	120	2.00	6.18	
Total Xylenes*	<0.150	0.150	01/17/2024	ND	7.15	119	6.00	6.86	
Total BTEX	<0.300	0.300	01/17/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	432	16.0	01/17/2024	ND	448	112	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10*	<10.0	10.0	01/17/2024	ND	190	95.1	200	0.795	
DRO >C10-C28*	<10.0	10.0	01/17/2024	ND	188	94.1	200	0.755	
EXT DRO >C28-C36	<10.0	10.0	01/17/2024	ND					
Surrogate: 1-Chlorooctane	73.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	68.5	% 49.1-14	0						

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 and any other cause whatscever 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 damages, including whose 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 damages, including whose share there applied by the services arise of the services hereunder by Cardinal, regardless of whether such 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.

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:		
Received:	01/16/2024		Sampling Date:	01/16/2024
Reported:	01/19/2024		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.06395,-103.	604785		

Sample ID: FS 19 2' (H240186-02)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/17/2024	ND	2.24	112	2.00	0.503	
Toluene*	<0.050	0.050	01/17/2024	ND	2.30	115	2.00	4.81	
Ethylbenzene*	<0.050	0.050	01/17/2024	ND	2.40	120	2.00	6.18	
Total Xylenes*	<0.150	0.150	01/17/2024	ND	7.15	119	6.00	6.86	
Total BTEX	<0.300	0.300	01/17/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	01/17/2024	ND	448	112	400	3.64	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/17/2024	ND	190	95.1	200	0.795	
DRO >C10-C28*	284	10.0	01/17/2024	ND	188	94.1	200	0.755	
EXT DRO >C28-C36	418	10.0	01/17/2024	ND					
Surrogate: 1-Chlorooctane	82.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	78.2	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:		
Received:	01/16/2024		Sampling Date:	01/16/2024
Reported:	01/19/2024		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.06395,-103.6	04785		

Sample ID: FS 20 2' (H240186-03)

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/17/2024	ND	2.24	112	2.00	0.503	
Toluene*	<0.050	0.050	01/17/2024	ND	2.30	115	2.00	4.81	
Ethylbenzene*	<0.050	0.050	01/17/2024	ND	2.40	120	2.00	6.18	
Total Xylenes*	<0.150	0.150	01/17/2024	ND	7.15	119	6.00	6.86	
Total BTEX	<0.300	0.300	01/17/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	01/17/2024	ND	448	112	400	3.64	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/17/2024	ND	190	95.1	200	0.795	
DRO >C10-C28*	158	10.0	01/17/2024	ND	188	94.1	200	0.755	
EXT DRO >C28-C36	168	10.0	01/17/2024	ND					
Surrogate: 1-Chlorooctane	81.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	74.3	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:		
Received:	01/16/2024		Sampling Date:	01/16/2024
Reported:	01/19/2024		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.06395,-103.	604785		

Sample ID: FS 21 2' (H240186-04)

BTEX 8021B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/17/2024	ND	2.24	112	2.00	0.503	
Toluene*	<0.050	0.050	01/17/2024	ND	2.30	115	2.00	4.81	
Ethylbenzene*	<0.050	0.050	01/17/2024	ND	2.40	120	2.00	6.18	
Total Xylenes*	<0.150	0.150	01/17/2024	ND	7.15	119	6.00	6.86	
Total BTEX	<0.300	0.300	01/17/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2960	16.0	01/17/2024	ND	448	112	400	3.64	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/17/2024	ND	190	95.1	200	0.795	
DRO >C10-C28*	242	10.0	01/17/2024	ND	188	94.1	200	0.755	
EXT DRO >C28-C36	339	10.0	01/17/2024	ND					
Surrogate: 1-Chlorooctane	111 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	104 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:		
Received:	01/16/2024		Sampling Date:	01/16/2024
Reported:	01/19/2024		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.06395,-103.6	04785		

Sample ID: SW 1 0-2' (H240186-05)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/17/2024	ND	2.24	112	2.00	0.503	
Toluene*	<0.050	0.050	01/17/2024	ND	2.30	115	2.00	4.81	
Ethylbenzene*	<0.050	0.050	01/17/2024	ND	2.40	120	2.00	6.18	
Total Xylenes*	<0.150	0.150	01/17/2024	ND	7.15	119	6.00	6.86	
Total BTEX	<0.300	0.300	01/17/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 71.5-13	24						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	01/17/2024	ND	448	112	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/17/2024	ND	190	95.1	200	0.795	
DRO >C10-C28*	<10.0	10.0	01/17/2024	ND	188	94.1	200	0.755	
EXT DRO >C28-C36	<10.0	10.0	01/17/2024	ND					
Surrogate: 1-Chlorooctane	79.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	74.7	% 49.1-14							

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager

Received by OCD: 4/16/2024 9:54:01 AM

CARDINAL

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Ensolum, LLC	a de la calega de la	alex origin						B	HL TO	834 J 3					ANA	LYSIS	S RE	QUE	ST			
Project Manager: Houdlie G	reen					P.(0. #					[1				1				Γ
Address: 601 N. Mariens		. ?	STE	488		Co	mpa	any:	BTA C	Dil			1									
City: Midland	State: TX	Zip:	70	1701		A	lm:	Kelt	on Be	egird			1	1								
Phone #: (435) 557 - 8895	Fax ft					Ad	idres	ss: [[345 Per	es St.				1								
Project #: 0312012027	Project Owner					Cit	ty:	Mic	alland		-		1									1
Project Name: Meson B #25	5					Sta	ale:	TX	Zip: 7	9781			1									
Project Location: Lea County	,					Ph	one	款:														1
Sampler Name: SK						Fa	x 称	-														
FOR LAB USE ONLY			T	MAT	RIX	-	PRE	SERV	/ SAN	IPLING				1								
		WO .	S S						1				(e)									
Lab I.D. Sample I.D.	Depth	(G)RAB OR (C)OMP.	GROUNDWATER	WASTEWATER SOIL			ŵ	_	1		EX	-	10	1								
Lap I.D. Semple I.D.	(feet)	BOI	INDIA IN	EWI	1	SLUDGE OTHER :	ACID/BASE:	ICE / COOL			1	TPH	Chlorid									
4240186		CORP.	N N	VAST OIL	2	THE	GD	2 H	DATE	TIME	M	F	5									
13/2	1	Ž	10	N N		00		X	1/16/29	1-1-1-	K	K	X	1							-	T
2 ES 19	2	C	+	X				X	(116/24		11	II	T									T
3 FS 20	2	C	T	F				X	TI	1027												
4 FS 21	2	C	T	X				X		651	11										_	
55W7	0-2	C		X				x	V	1208	X	X	X	-								1
			1		-		\square	1		<u> </u>			<u> </u>	-								-
	- F	\vdash	-		2		H	4	k-	1A-			-						-	-		⊢
		\vdash	+	4		H	H	4	19	¥	-	1	E		-				-	-	-	E
		╞╞	+		4	47	F	Ŧ	10		1		1	-	2	-	-				1	F
PLEASE NOTE: Liability and Damages, Cardinalia liability and clien	nt's exclusive cornectly for a	ny claim ar	rising visi	other based	in contra	ictor for	L shall I	be limited	f to the encurt pe	id by the climit for	rBa		-		Land						Contract of	<u> </u>
analyses. All claims including gote for negligance and any other o sorvice. In no event shall Confact be fields for incidental or concer	montol demonstry including	without fin	nilation.	functioners into	1110206	s. Jose of	1230.01	r loos of t	profits incurred by	client, its subside	Cinc.	ble										
atiliates or successors arising att of or related to the performance Relinquished By:	Date:, / 7/	Rece	eived	By:	luciy cloi	in is biss	of upor		the opeve stated p	Il Verbal Re	esuic:	1 Ye	s /4	No	Add'l 1	Phone	k					
ahor din	Timp: 451		1	1/10	UN	1			Lin	All Result	s are e	mailed.	Pleas	e prov	ide Emi	8H 800	1899:					
Relinquished By:	Date:	Rece	<u>////</u>	Bv:	<u>m</u>	K	24	cay	equ	REMARK	S:											
	Tima:								/		2012											3
		1 t		Para Ir	Cont	inte-		CUEC	KED BY:	Turnarou	od 77m		Stand	iard .	REK.	Ranto	da (onl	v) Sam	ple Cor	dition		
	served Temp. "C	2.4		Semple Cool	niaci	-			KED BY: itials)	1			Rush	1		Cool I	ntact	Ob	served			
Sampler - UPS - Bus - Other: Cor	reated Temp. *C			Yes No	B	es No		V	-0-	Thormomel	Factor			1/10	124	Ves No	L No	Co	rrected	Temp.	°C	

† Cardinal cannot accept verbal changes. Please email changes to celey.teene@cardinallabenm.com



February 06, 2024

HADLIE GREEN ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD, NM 88220

RE: MESA B #25

Enclosed are the results of analyses for samples received by the laboratory on 02/01/24 13:24.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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. Keine

Celey D. Keene Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS CARLSBAD NM, 88220 Fax To:	5 HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 09 1' (H240491-01)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.0	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	02/02/2024	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	96.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	98.3	% 49.1-14	0						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS I CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 10 1' (H240491-02)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.4	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	78.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	81.0	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS I CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 11 1' (H240491-03)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.8	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1280	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	80.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	83.2	% 49.1-14	8						

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 and any other cause whatscever 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 damages, including whose 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 damages, including whose share there applied by the services arise of the services hereunder by Cardinal, regardless of whether such 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. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 13 1' (H240491-04)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.2	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	alyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1520	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	84.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	88.4	% 49.1-14	0						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 14 2' (H240491-05)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.4	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	79.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	82.7	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS F CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 15 2' (H240491-06)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.3	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	86.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.7	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS I CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 16 2' (H240491-07)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.6	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	94.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	95.2	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARK CARLSBAD NM, 88220 Fax To:		
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 17 2' (H240491-08)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.2	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	alyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	81.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	83.3	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 18 2' (H240491-09)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.5	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	83.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.1	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS H CARLSBAD NM, 88220 Fax To:	łWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 22 2' (H240491-10)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	96.6	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	86.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	90.5	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS H CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 23 2' (H240491-11)

BTEX 8021B	mg/	kg	Analyze	ed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.4	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	'kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	69.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	72.0	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 24 2' (H240491-12)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.7	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	86.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	91.5	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS H CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 25 2' (H240491-13)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.0	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	90.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	96.2	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 26 2' (H240491-14)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	96.1	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	80.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.0	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS H CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 27 2' (H240491-15)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.20	110	2.00	8.70	
Toluene*	<0.050	0.050	02/02/2024	ND	2.18	109	2.00	8.50	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.17	109	2.00	8.48	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.36	106	6.00	8.78	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.3	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	85.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.7	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS I CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 28 2' (H240491-16)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.1	
Toluene*	<0.050	0.050	02/02/2024	ND	2.21	111	2.00	11.1	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.5	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.65	111	6.00	10.4	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	90.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	94.9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS I CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: FS 29 2' (H240491-17)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.1	
Toluene*	<0.050	0.050	02/02/2024	ND	2.21	111	2.00	11.1	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.5	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.65	111	6.00	10.4	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/03/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/03/2024	ND					
Surrogate: 1-Chlorooctane	81.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	82.0	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:								
Received:	02/01/2024	Sampling Date:	01/30/2024					
Reported:	02/06/2024	Sampling Type:	Soil					
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact					
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez					
Project Location:	BTA - LEA COUNTY, NM							

Sample ID: SW 02 0-0.5' (H240491-18)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.1	
Toluene*	<0.050	0.050	02/02/2024	ND	2.21	111	2.00	11.1	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.5	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.65	111	6.00	10.4	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/03/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/03/2024	ND					
Surrogate: 1-Chlorooctane	69.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	70.1	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:								
Received:	02/01/2024	Sampling Date:	01/30/2024					
Reported:	02/06/2024	Sampling Type:	Soil					
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact					
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez					
Project Location:	BTA - LEA COUNTY, NM							

Sample ID: SW 04 0-1' (H240491-19)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.1	
Toluene*	<0.050	0.050	02/02/2024	ND	2.21	111	2.00	11.1	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.5	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.65	111	6.00	10.4	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	43.7	10.0	02/03/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/03/2024	ND					
Surrogate: 1-Chlorooctane	72.2 % 48.2-13		4						
Surrogate: 1-Chlorooctadecane	75.9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS I CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: SW 06 0-1' (H240491-20)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.1	
Toluene*	<0.050	0.050	02/02/2024	ND	2.21	111	2.00	11.1	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.5	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.65	111	6.00	10.4	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2024	ND	169	84.5	200	9.89	
DRO >C10-C28*	<10.0	10.0	02/03/2024	ND	170	84.8	200	12.1	
EXT DRO >C28-C36	<10.0	10.0	02/03/2024	ND					
Surrogate: 1-Chlorooctane	71.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	73.2	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS CARLSBAD NM, 88220 Fax To:		
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: SS 13 0.5' (H240491-21)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.1	
Toluene*	<0.050	0.050	02/02/2024	ND	2.21	111	2.00	11.1	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.5	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.65	111	6.00	10.4	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/05/2024	ND	416	104	400	7.41	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	192	96.2	200	1.11	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	176	88.1	200	3.93	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	96.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	102 9	% 49.1-14	8						

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 and any other cause whatscever 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 damages, including whose 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 damages, including whose share there applied by the services arise of the services hereunder by Cardinal, regardless of whether such 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. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS H CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: SS 15 0.5' (H240491-22)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.1	
Toluene*	<0.050	0.050	02/02/2024	ND	2.21	111	2.00	11.1	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.5	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.65	111	6.00	10.4	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	02/05/2024	ND	400	100	400	7.69	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	219	110	200	3.59	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	230	115	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	97.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	94.9	% 49.1-14	8						

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 and any other cause whatscever 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 damages, including whose 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 damages, including whose share there applied by the services arise of the services hereunder by Cardinal, regardless of whether such 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. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: SS 17 0.5' (H240491-23)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.1	
Toluene*	<0.050	0.050	02/02/2024	ND	2.21	111	2.00	11.1	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.5	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.65	111	6.00	10.4	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	02/05/2024	ND	400	100	400	7.69	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	219	110	200	3.59	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	230	115	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	95.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	93.8	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS I CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: SS 18 0.5' (H240491-24)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.1	
Toluene*	<0.050	0.050	02/02/2024	ND	2.21	111	2.00	11.1	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.5	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.65	111	6.00	10.4	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	02/05/2024	ND	400	100	400	7.69	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	219	110	200	3.59	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	230	115	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	94.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	93.9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS I CARLSBAD NM, 88220 Fax To:	HWY	
Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/06/2024	Sampling Type:	Soil
Project Name:	MESA B #25	Sampling Condition:	Cool & Intact
Project Number:	03C2012027 (32.06395-103.604785)	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, NM		

Sample ID: SS 19 0.5' (H240491-25)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.1	
Toluene*	<0.050	0.050	02/02/2024	ND	2.21	111	2.00	11.1	
Ethylbenzene*	<0.050	0.050	02/02/2024	ND	2.21	110	2.00	11.5	
Total Xylenes*	<0.150	0.150	02/02/2024	ND	6.65	111	6.00	10.4	
Total BTEX	<0.300	0.300	02/02/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	02/05/2024	ND	400	100	400	7.69	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	219	110	200	3.59	
DRO >C10-C28*	<10.0	10.0	02/02/2024	ND	230	115	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	02/02/2024	ND					
Surrogate: 1-Chlorooctane	102 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	102 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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 SM4500CI-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

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	e: Ensolum, LLC										B	ILL	L TO	10.15.51					ANA	LYSIS	RE	QUE	ST	
Project Manage	er: Hadlie Green								P.0). #:	÷													
Address: 3122	National Parks Hw	vy							Co	mpa	any: E	BTA	Oil											
city: Carlsba	ad	State:NM	Zip:	88	322	0			Att	n: K	elto	n Be	eaird		1									
Phone #: 432	2 557-8895	Fax #:							Ad	dres	s: 10	04 5	S Peco	s St										
Project #:03C2		Project Owner	: BT	Ā					Cit	y: M	lidla	nd			1									
Project Name: I	a man a second sec								Sta	te:	ΤХ	Zij	p: 7970)1										
	on: 32.06395, -103.60	4785								one					1									
Sampler Name:									Fax	¢#:					1									
FOR LAB USE ONLY	1	1				M	ATRI	x		PRE	SER	V.	SAMP	LING	1									
HJ4049 Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER .	DATE	TIME	BTEX	ТРН	Chlorides	GRO + DRO	Benzene					
1	FS09	1	С			2	2				×				×	Х	X	X	X		_			
2	FS10	1	С	1		2	ζ				×	1	/30/24	09:56	×	×	×	×	×					
3	FS11	1	С	1		2	ζ				×	1/	/30/24	10:04	×	×	×	×	×					
	FS13	1	С	1		2	ζ				×			10:09	×	X	×	×	×					
	FS14	2	С	1		2	ζ				x			10:26	×	×	×	×	×					
6		2	С	1		2	ζ				×	1	/30/24	10:30	×	×	×	×	×					
7	FS16	2	C	1		2	ζ				×	1	/30/24	10:38	×	×	×	×	X					
8	FS17	2	С	1		2	ζ				×	1/	/30/24	10:43	×	×	×	×	×					
9	FS18	2	С	1		2	ζ				×	1/	/30/24	10:48	X	×	X	×	X					
10	FS22	2	C	1		2	ζ				×	1/	/30/24	10.51	X	X	X	X	X					

analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable

service. In no event shall Cardinal be liable for incidential or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,

oder by Carringl representees of whether such claim is based upon any of the above stated ray isons or otherwise

Relinquished By:	2/1/24 Time:	ived By:		Verbal Result: Ves N All Results are emailed. Please HGreen@ensolum.com		'I Phone #: mail address:
Relinquished By:	Date: 24 Recei	ived By:	ney	REMARKS: Incident# NA	PPZI	112744758
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3: UL	Sample Condition Cool Intact Yes Yes No No	CHECKED BY: (Initials)	Turnaround Time: Standa HI O HIN Thermometer ID #113 Correction Factor 0.5%	rd 🛛	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C Yes Yes Nc No Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Page 28 of 30

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	Ensolum, LLC										BI	LL TO						ANAL	YSIS	REQU	JEST		
Project Manage	r: Hadlie Green								P.0	. #:				Т	1	1					Τ	TT	
Address: 3122	National Parks Hw	'y							Con	npan	y: B	TA Oil		1					- 1				
city: Carlsba	ad	State:NM	Zip	88	220					-	-	Beaird		1									
Phone #: 432	557-8895	Fax #:							Add	ress	: 104	4 S Pecc	os St	1									
Project #:03C2	012027	Project Owner	: BT	A				_		Mic				1									
Project Name; N	lesa B #25							_				Zip: 7970	01	1									
Project Location	1: 32.06395, -103.604	4785								ne #				1									
Sampler Name:	Mario Sarkis								Fax	#:				1									
FOR LAB USE ONLY				Т		MA	TRIX	6	F	RES	ERV.	SAMP	PLING	1									
HHOU9 Lab I.D.	Sample I.D.	Sample Depth (feet)		# CONTAINERS	GROUNDWATER	SOIL	OIL	SLUDGE	OTHER:	ICE / COOL	OTHER :	DATE	TIME	BTEX	ТРН	Chlorides	GRO + DRO	Benzene					
11	FS23	2	С	1		X				×		1/30/24	11:09	×	X	X	X	X					
R	FS24	2	С	1		X				×		1/30/24		×	×	×	×	×					
13	FS25	2	С	1		Χ				X		1/30/24	11:17	X	×	×	×	×					
14	FS26	2	С	1		Х				×		1/30/24	11:22	×	×	×	×	X					
15	FS27	2	С	1		X				×		1/30/24	11:27	X	×	×	×	X					
16	FS28	2	С	1		Х				×		1/30/24	11:32	X	×	×	×	X					
17	FS29	2	C	1		Χ				×		1/30/24	11:36	×	×	×	×	X					
18	SW02 G	D- 0.5	С	1		Χ				×		1/30/24	11:54	×	×	×	×	×					
19	SW04	0-1	С	1		Χ				×		1/30/24	11:59	×	×	×	×	X					
20	SW06	0-1	C	1		X				×		1/30/24			×	~	×	V					

AM

9:54:01

Received by OCD: 4/16/2024

analyses. All claims including those for negligence and any other cause whatscever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable

service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliator out of or re

Relinquished By:	Date: Z/1/24 Receiv	ed By:		Verbal Result: All Results are emai HGreen@ensolum	led. Please provide	dd'l Phone #: e Email address:	
Relinquished By:	Time 324	od Ry:	ill	REMARKS: Incident #	NAPPZI	274475	18
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. *C 3.U2 Corrected Temp. *C	Sample Condition Cool Intact Yes Yes No No	CHECKED BY:	Turnaround Time: #40 Thermometer ID #113 Correction Factor -0.5		Bacteria (only) Cool Intact Yes Yes Nc No	Sample Condition Observed Temp. °C Corrected Temp. °C

+ Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Released to Imaging: 5/14/2024 10:31:04 AM

Received by OCD: 4/16/2024 9:54:01 AM

Company Name:



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

Ensolum, LL	С								B	ILL TO		19				AN	ALYSI	S RE	OUES	T	
Project Manager: Hadlie Green								P.	0. #:			T	T	1	1	T		T			1 1
Address: 3122 National Parks	s Hwy							c	ompany: E	BTA Oil		1						1 1			1 1
city: Carlsbad	State: NM	Zip	: 8	822	20			-	tn: Keltor		1										
Phone #: 432 557-8895	Fax #:							1	ddress: 10	Constanting a											
Project #:03C2012027	Project Owner	r B	ТΔ					1	ty: Midlar	entra presión dese		1									1 1
Project Name; Mesa B #25			173			-		1			701	-									
Project Location: 32.06395, -103	3 604795								ate: TX	Zip: / 9/	01	-									
Sampler Name: Mario Sarkis	0.004700						_	1	none #:			1									1 1
FOR LAB USE ONLY	1			—	M	ATR	IX	Fa	x #: PRESERV	SAN	IPLING	4									
HƏHƏHƏH Lab I.D. Sample I.I	(teet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	OIL	SLUDGE	OTHER :	L 10		TIME	BTEX	ТРН	Chlorides	GRO + DRO	Benzene					
1.	0.5	G	1		X				×	1/30/24	14:08	X	X	X	X	X					
SS15	0.5	G	1		2	-			×	1/30/24	14:22	×	×	×	×	×					
00 SS17 00 SS18	0.5	G	1		X	-			×	1/30/24	14:38	×	×	×	×	×					
A. 1	0.5	G	1		X				X	1/30/24	14:44	×	×	×	×	×					
05 SS19	0.5	G	1		X		-		×	1/30/24	14:52	×	×	×	×	×					
PLEASE NOTE: Liability and Damages. Cardinal's liability a inalyses. All claims including those for negligence and any envice. In no event shall Cardinal be liable for incidental or iffliates or successors arising out of or related to the perform	ind client's exclusive remedy for any other cause whatsoever shall be de- consequental damages, including w nance of services hereunder by Can	emed w	mitati	on husi	made i	n wnbr	vg and	receive	ed by Cardinal wi	ithin 30 days afte	r completion of th	e applicat	ile		L						
Ma	Z#1/24 Time:	Rec	eive	ed B	y:	4	1				Verbal Res All Results HGreen(sult: are en		Pleas	No e provi	Add'l de En	Phone # ail addre	t: ess:			
Relinquished By:	Date:2 124 Time: 1324	Rece	eive X	ed By	y: ()(XK	il	n	1er	A	REMARKS		7	έ Ni	AP	ורי			200	,	
Delivered By: (Circle One)	D T 10 7	100	2		mple			4	CHECK	ED BY:	Turnaround	d Time	17 1	Stand	lard	G	Bacteri	a (only)	/JX Sample	Condition	0
Sampler - UPS - Bus - Other:	Corrected Temp. "C	U	-	Co	Yes	Inta	ct Yes		(Initia	als	Turnaround			Rush		Õ	Cool In	lact	Obser	ved Temp.	°C



February 21, 2024

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: MESA B #25

Enclosed are the results of analyses for samples received by the laboratory on 02/16/24 13:21.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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,

Celez D. Keine

Celey D. Keene Lab Director/Quality Manager



	F 7 N	ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. 4IDLAND TX, 79705 Fax To:		
Received:	02/16/2024		Sampling Date:	02/16/2024
Reported:	02/21/2024		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06395,-103.60	4785		

Sample ID: SS 14 0.5' (H240760-01)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/17/2024	ND	1.99	99.5	2.00	10.6	
Toluene*	<0.050	0.050	02/17/2024	ND	1.97	98.5	2.00	10.6	
Ethylbenzene*	<0.050	0.050	02/17/2024	ND	1.96	97.9	2.00	10.3	
Total Xylenes*	<0.150	0.150	02/17/2024	ND	5.70	95.0	6.00	10.4	
Total BTEX	<0.300	0.300	02/17/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.1	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	02/19/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/16/2024	ND	196	97.8	200	1.29	
DRO >C10-C28*	<10.0	10.0	02/16/2024	ND	203	102	200	5.85	
EXT DRO >C28-C36	<10.0	10.0	02/16/2024	ND					
Surrogate: 1-Chlorooctane	92.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	102	% 49.1-14	0						

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 and any other cause whatscever 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 damages, including whose 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 damages, including whose share there applied by the services arise of the services hereunder by Cardinal, regardless of whether such 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.

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



	 - -	ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:		
Received:	02/16/2024		Sampling Date:	02/16/2024
Reported:	02/21/2024		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06395,-103.60)4785		

Sample ID: SS 16 0.5' (H240760-02)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2024	ND	1.99	99.5	2.00	10.6	
Toluene*	<0.050	0.050	02/17/2024	ND	1.97	98.5	2.00	10.6	
Ethylbenzene*	<0.050	0.050	02/17/2024	ND	1.96	97.9	2.00	10.3	
Total Xylenes*	<0.150	0.150	02/17/2024	ND	5.70	95.0	6.00	10.4	
Total BTEX	<0.300	0.300	02/17/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.6	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	02/19/2024	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/16/2024	ND	196	97.8	200	1.29	
DRO >C10-C28*	<10.0	10.0	02/16/2024	ND	203	102	200	5.85	
EXT DRO >C28-C36	<10.0	10.0	02/16/2024	ND					
Surrogate: 1-Chlorooctane	77.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	88.2	% 49.1-14	0						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:		
Received:	02/16/2024		Sampling Date:	02/16/2024
Reported:	02/21/2024		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06395,-103.	604785		

Sample ID: SW 3 0-2' (H240760-03)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2024	ND	1.99	99.5	2.00	10.6	
Toluene*	<0.050	0.050	02/17/2024	ND	1.97	98.5	2.00	10.6	
Ethylbenzene*	<0.050	0.050	02/17/2024	ND	1.96	97.9	2.00	10.3	
Total Xylenes*	<0.150	0.150	02/17/2024	ND	5.70	95.0	6.00	10.4	
Total BTEX	<0.300	0.300	02/17/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.2	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	02/19/2024	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/16/2024	ND	196	97.8	200	1.29	
DRO >C10-C28*	<10.0	10.0	02/16/2024	ND	203	102	200	5.85	
EXT DRO >C28-C36	<10.0	10.0	02/16/2024	ND					
Surrogate: 1-Chlorooctane	86.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	97.3	% 49.1-14	0						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



	H 7 M	INSOLUM, LLC HADLIE GREEN 105 W WADLEY AVE. MIDLAND TX, 79705 Fax To:		
Received:	02/16/2024		Sampling Date:	02/16/2024
Reported:	02/21/2024		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06395,-103.604	4785		

Sample ID: SW 5 0-2' (H240760-04)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2024	ND	1.99	99.5	2.00	10.6	
Toluene*	<0.050	0.050	02/17/2024	ND	1.97	98.5	2.00	10.6	
Ethylbenzene*	<0.050	0.050	02/17/2024	ND	1.96	97.9	2.00	10.3	
Total Xylenes*	<0.150	0.150	02/17/2024	ND	5.70	95.0	6.00	10.4	
Total BTEX	<0.300	0.300	02/17/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.0	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272 16.0		02/19/2024	ND	432	108	400	0.00	
TPH 8015M	mg/	′kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/16/2024	ND	196	97.8	200	1.29	
DRO >C10-C28*	<10.0	10.0	02/16/2024	ND	203	102	200	5.85	
EXT DRO >C28-C36	<10.0	10.0	02/16/2024	ND					
Surrogate: 1-Chlorooctane	82.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	101 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:		
Received:	02/16/2024		Sampling Date:	02/16/2024
Reported:	02/21/2024		Sampling Type:	Soil
Project Name:	MESA B #25		Sampling Condition:	Cool & Intact
Project Number:	03C2012027		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06395,-103.	604785		

Sample ID: SW 7 0-1' (H240760-05)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2024	ND	1.99	99.5	2.00	10.6	
Toluene*	<0.050	0.050	02/17/2024	ND	1.97	98.5	2.00	10.6	
Ethylbenzene*	<0.050	0.050	02/17/2024	ND	1.96	97.9	2.00	10.3	
Total Xylenes*	<0.150	0.150	02/17/2024	ND	5.70	95.0	6.00	10.4	
Total BTEX	<0.300	0.300	02/17/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.7	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160 16.0		02/19/2024 ND		432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/16/2024	ND	196	97.8	200	1.29	
DRO >C10-C28*	<10.0	10.0	02/16/2024	ND	203	102	200	5.85	
EXT DRO >C28-C36	<10.0	10.0	02/16/2024	ND					
Surrogate: 1-Chlorooctane	84.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	95.8	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

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

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

roject Manag	e: Ensolum, LLC er: Hadlie Gr						BILL 7	0	10	_						
ddrase: 10	11 NI NADIO	0.10				P.O. #:			1		ТТ		LYSIS	REQUES	ЪТ	
ity: Midl	DI N Marie		*40	0		Company	:RTA (il	1							
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	and	State: TX	Zip:	19701		Attn: Ke	nn B	aird	1	1						
ione #: 40	2-557-889	与 Fax #:				Address:	1045	Pecos St								
oject #: 05	C2012027	Project Own	er:			City: M	diana	110551		1						
oject Name:	Mesa B #2	5				State: T	X Zip:	1	1							
oject Locatio	n: 32.04395	-103.0	047	85		Phone #:	∧ zip.	19701	1							
mpler Name: IR LAB USE ONLY	Mariaha	O'Dell	_			Fax #:			1							
R DAB USE ONLY				MAT		PRESER	V. SA	MPLING	0							
			MP	α					3							
ab I.D.	Sample I.D.	Depth	(C)(ERS	TER		11	1		10							
	campic i.D.	(feet)	3 OR	NDW WA'	ш	OOL :			0	\times	T					
40760			C (G)RAB OR (C)OMP	GROUNDWATER WASTEWATER SOIL	SLUDGE	ACID/BASE ICE / COOL	2		2 mi oride	TE	Hd					
1	SS14	OFI	0 #	GROI WAST SOIL	SLU	ACI	DATE	TIME	\odot	20	F					
2	SS14	0.5'	01	X		X	2/10/2	49:40	X	X	X	+ +			+	_
3	SW3	0-21	61 C1	X	++	X		10:30		1)				+ +	_
4	SW5	0-21	C 1	X	++	X		10:20							+	
5	SW7	0-11	čī	X	++	X	16	10:10								
					++-		0	9:50	*	4	Y					_
					++-		-			_	-	++				-
			11		++											
										-	_				no	
IOTE: Liability and D	amages Carringle Inhibit				TT					-					Prin	
I claims including to no event shall Cardin	amages. Cardinal's liability and clien ose for negligence and any other ca- al be liable for incidental or consequ- at of or related to the performance of	Is exclusive remedy for any use whatsoever shall be dee	claim arising w med waived u	whether based in co infess made in write	ntract or to	t, shall be limited :	o the amount pai	by the client for the			_					
successors arising o	it of or related to the performance of	f services hereunder by Care	thout limitation final, regardles), business interrupt 16 of whether such (ions, loss o	fuse, or loss of pr	thin 30 days afte fits incurred by c	completion of the a ient, its subsidiaries,	pplicable							
Va JA	om	2/10/24	Received	d By:	C	on whom with ot the	movine stated re-	Verbal Resu	it: □	Yes	12 No	Add'l Pho	and the	_		
	, CP	Time: 13:21	NU	DAR	in	111	. 1	All Results a	re emai	iled, PI	ease prov	ido Email	address:			_
uished By:		0.1	Received	i By:	c v	me	y	haree n(eens	Dium	.com					
		Time:			,		1	REMARKS: API: 30	-DOZ	aent	#:nAr	PP2112	274475	8		-
red By: (Circle	One) Obse	rved Temp. *C		Sample C-	dist			111.00	02	5-4	0410					
er - UPS - Bus	1000 A	seted Tamp. "C4	Oz	Sample Con Cool Intac	t	CHECKI		Furnaround T	ime:	Sta	andard	K Ba	cteria (only)	Sample Co	Indition	
ORM-OUB IC 3.		itemp. C I		A Yes	Yes	NC		5 days	#112	Ru	sh	L C00	I Intact Yes Yes	Observed	I Temp. °C	

Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Received by OCD: 4/16/2024 9:54:01 AM

Page 8 of 8



APPENDIX E

NMOCD Notifications

Released to Imaging: 5/14/2024 10:31:04 AM

Enviro, OCD, EMNRD
Hadlie Green
Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
RE: [EXTERNAL] BTA - Sampling Notification - Week of 07/3/2023
Thursday, June 29, 2023 3:47:47 PM
image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JΗ

Jocelyn Harimon • Environmental Specialist Environmental Bureau EMNRD - Oil Conservation Division 1220 South St. Francis Drive | Santa Fe, NM 87505 (505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov http:// www.emnrd.nm.gov



From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, June 29, 2023 8:18 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Kelton Beaird <KBeaird@btaoil.com>; Peter Van
Patten <pvanpatten@ensolum.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 07/3/2023

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

BTA anticipates collecting confirmation samples at the following locations the week of July 3, 2023.

- Vacuum SWD H 35 Pipeline / nAPP2313058428
 - Sampling Date: 7/5/2023 @ 9:00 AM MST

- Chiso 14 State Jet Pump Excavation / nAPP2205837214
 - Sampling Date: 7/6/2023 @ 9:00 AM MST
- Mesa B #25 / nAPP2112744758
 - Sampling Date: 7/6-7/2023 @ 9:00 AM MST
- Mesa #16H Flowline / nAPP2123156473
 - Sampling Date: 7/7/2023 @ 9:00 AM MST

Thank you,



Hadlie Green Project Geologist 432-557-8895 hgreen@ensolum.com Ensolum, LLC

From:	Buchanan, Michael, EMNRD
To:	Hadlie Green; Enviro, OCD, EMNRD; Velez, Nelson, EMNRD; Hamlet, Robert, EMNRD
Cc:	Tacoma Morrissey; Kelton Beaird
Subject:	RE: [EXTERNAL] BTA - Sampling Notification - Week of 07/10/2023
Date:	Wednesday, July 5, 2023 3:17:40 PM
Attachments:	image001.png image002.png image003.png image004.png image005.jpg

[**EXTERNAL EMAIL**]

Good afternoon,

Thank you for the notification. Please include a copy of this and all notifications in the C-141, remedial and/or closure reports to ensure the notifications are documented in the project file.

Regards,

Mike Buchanan ● Environmental Specialist Environmental Bureau EMNRD - Oil Conservation Division 8801 Horizon Blvd. NE | Albuquerque, NM 87113 | michael.buchanan@emnrd.nm.gov http://www.emnrd.nm.gov/ocd_



From: Hadlie Green <hgreen@ensolum.com>
Sent: Wednesday, July 5, 2023 1:46 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Kelton Beaird <KBeaird@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 07/10/2023

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

BTA anticipates collecting confirmation samples at the following locations the week of July 10, 2023.

- Carrasco 14-1 / nAPP2313656375
 - Sampling Date: 7/12/2023 @ 9:00 AM MST

Mesa B #25 / nAPP2112744758

• Sampling Date: 7/6-7/2023 @ 9:00 AM MST

Thank you,



Hadlie Green Project Geologist 432-557-8895 hgreen@ensolum.com

Ensolum, LLC

From:	Wells, Shelly, EMNRD
To:	Hadlie Green
Cc:	Kelton Beaird; Tacoma Morrissey; Aimee Cole; Velez, Nelson, EMNRD; Bratcher, Michael, EMNRD
Subject:	RE: [EXTERNAL] BTA - Sampling Notification - 11/7/2023 - Mesa B #25
Date:	Friday, November 3, 2023 12:45:32 PM
Attachments:	image001.png
	image002.png
	image003.png
	image004.png

[**EXTERNAL EMAIL**]

Hi Hadlie,

The OCD has received your notification. Notification requirements are **two full business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to ensure inclusion in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced Environmental Bureau EMNRD-Oil Conservation Division 1220 S. St. Francis Drive | Santa Fe, NM 87505 (505)469-7520 <u>Shelly.Wells@emnrd.nm.gov</u> http://www.emnrd.state.nm.us/OCD/

From: Hadlie Green <hgreen@ensolum.com>
Sent: Friday, November 3, 2023 11:24 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kelton Beaird <KBeaird@btaoil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>; Aimee
Cole <acole@ensolum.com>
Subject: [EXTERNAL] BTA - Sampling Notification - 11/7/2023 - Mesa B #25

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

BTA anticipates collecting confirmation samples at the following location on Tuesday, November 7, 2023.

• Mesa B #25 / NAPP2112744758

• Sampling Date: 11/7/2023 @ 9:00 AM MST

Thank you,



Hadlie Green Project Geologist 432-557-8895 hgreen@ensolum.com Ensolum, LLC 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

QUESTIONS

Action 333798

QUESTIONS						
Operator:	OGRID:					
BTA OIL PRODUCERS, LLC	260297					
104 S Pecos	Action Number:					
Midland, TX 79701	333798					
	Action Type:					
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)					

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2112744758
Incident Name	NAPP2112744758 MESA B #25 @ 30-025-46410
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-025-46410] MESA B 8115 FEDERAL COM #025H

Location of Release Source

Please answer all the questions in this group.	
Site Name	MESA B #25
Date Release Discovered	03/31/2021
Surface Owner	Private

Incident Details

Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	Νο
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission. Crude Oil Released (bbls) Details Not answered. Cause: Equipment Failure | Fitting | Produced Water | Released: 90 BBL | Recovered: 74 BBL Produced Water Released (bbls) Details | Lost: 16 BBL Is the concentration of chloride in the produced water >10,000 mg/l Yes Condensate Released (bbls) Details Not answered. Natural Gas Vented (Mcf) Details Not answered. Natural Gas Flared (Mcf) Details Not answered. Other Released Details Not answered. Cut Valve and Overflow of Tank. Valve and choke washed out on sand trap. Tank ran over and Are there additional details for the questions above (i.e. any answer containing spilled water across the pad. Backhoe was already on location and used to scrape up wet Other, Specify, Unknown, and/or Fire, or any negative lost amounts) soil, limiting the amount of water soaking into the pad area. Free liquid was recovered with vac truck.

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

QUESTIONS, Page 2

Action 333798

Operator:	OGRID:
BTA OIL PRODUCERS, LLC	260297
104 S Pecos	Action Number:
Midland, TX 79701	333798
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

OUESTIONS (continued)

QUESTIONS

Initial Response

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e	e. gas only) are to be submitted on the C-129 form.

Not answered.

The responsible party must undertake the following actions immediately unless they could create a s	afety hazard that would result in injury.
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True

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

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager
	Email: kbeaird@btaoil.com
	Date: 04/16/2024

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

Page 136 of 141

QUESTIONS, Page 3

Action 333798

QUESTIONS (continued)

Operator:	OGRID:
BTA OIL PRODUCERS, LLC	260297
104 S Pecos	Action Number:
Midland, TX 79701	333798
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 75 and 100 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release ar	id the following surface areas:
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Νο

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.		
Requesting a remediation plan approval with this submission	Yes	
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.		
Have the lateral and vertical extents of contamination been fully delineated	Yes	
Was this release entirely contained within a lined containment area	No	
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)		
Chloride (EPA 300.0 or SM4500 Cl B)	8260	
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	44200	
GRO+DRO (EPA SW-846 Method 8015M)	30100	
BTEX (EPA SW-846 Method 8021B or 8260B)	0	
Benzene (EPA SW-846 Method 8021B or 8260B)	0	
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC which includes the anticipated timelines for beginning and completing the remediation.		
On what estimated date will the remediation commence	05/02/2023	
On what date will (or did) the final sampling or liner inspection occur	02/16/2024	
On what date will (or was) the remediation complete(d)	02/16/2024	
What is the estimated surface area (in square feet) that will be reclaimed	9240	
What is the estimated volume (in cubic yards) that will be reclaimed	1300	
What is the estimated surface area (in square feet) that will be remediated	5585	
What is the estimated volume (in cubic yards) that will be remediated 400		
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.		
What is the estimated volume (in cubic yards) that will be remediated These estimated dates and measurements are recognized to be the best guess or calculati	400 ion at the time of submission and may (be) change(d) over time as more remediation efforts are completed. sted in accordance with the physical realities encountered during remediation. If the responsible party has any need to	

significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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

QUESTIONS, Page 4

.

Action 333798

QUESTI	ONS (continued)	
Operator:	OGRID:	
BTA OIL PRODUCERS, LLC	260297	
104 S Pecos	Action Number:	
Midland, TX 79701	333798	
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	
QUESTIONS		
Remediation Plan (continued)		
Please answer all the questions that apply or are indicated. This information must be provided to the	appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate		
(Select all answers below that apply.)		
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes	
Which OCD approved facility will be used for off-site disposal	LEA LAND LANDFILL [fEEM0112342028]	
OR which OCD approved well (API) will be used for off-site disposal	Not answered.	
OR is the off-site disposal site, to be used, out-of-state	Not answered.	
OR is the off-site disposal site, to be used, an NMED facility	Not answered.	
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.	
(In Situ) Soil Vapor Extraction	Not answered.	
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.	
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.	
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.	
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.	
OTHER (Non-listed remedial process)	Not answered.	
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed ef which includes the anticipated timelines for beginning and completing the remediation.	forts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC	
to report and/or file certain release notifications and perform corrective actions for relea the OCD does not relieve the operator of liability should their operations have failed to a	nowledge and understand that pursuant to OCD rules and regulations all operators are required ises which may endanger public health or the environment. The acceptance of a C-141 report by idequately investigate and remediate contamination that pose a threat to groundwater, surface i does not relieve the operator of responsibility for compliance with any other federal, state, or	
I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: kbeaird@btaoil.com Date: 04/16/2024 rrdance with the physical realities encountered during remediation. If the responsible party has any need to	

significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

Released to Imaging: 5/14/2024 10:31:04 AM

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

QUESTIONS, Page 5

Action 333798

Operator: OGRID:	
BTA OIL PRODUCERS, LLC 260297	
104 S Pecos Action Number: Midland, TX 79701 333798	
Action Type: [C-141] Remediation Closure Request C-141 (C-14)	41-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of	the following items must be confirmed as part of any request for deferral of remediation.
Requesting a deferral of the remediation closure due date with the approval of this submission	Νο

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

QUESTIONS, Page 6

Page 139 of 141

Action 333798

QUESTIONS (co	ntinued)
	OGRID:

Operator:	OGRID:
BTA OIL PRODUCERS, LLC	260297
104 S Pecos	Action Number:
Midland, TX 79701	333798
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	313527
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	02/16/2024
What was the (estimated) number of samples that were to be gathered	5
What was the sampling surface area in square feet	4400

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.		
Requesting a remediation closure approval with this submission	Yes	
Have the lateral and vertical extents of contamination been fully delineated	Yes	
Was this release entirely contained within a lined containment area	No	
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes	
What was the total surface area (in square feet) remediated	5585	
What was the total volume (cubic yards) remediated	400	
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes	
What was the total surface area (in square feet) reclaimed	0	
What was the total volume (in cubic yards) reclaimed	0	
Summarize any additional remediation activities not included by answers (above)	n/a	
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 (in .pdf format) 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.		
to report and/or file certain release notifications and perform corrective actions for relea	knowledge and understand that pursuant to OCD rules and regulations all operators are required uses which may endanger public health or the environment. The acceptance of a C-141 report by 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete

I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: kbeaird@btaoil.com Date: 04/16/2024
--	--

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

Page 140 of 141

QUESTIONS, Page 7

Action 333798

QUESTIONS (continued) Operator: OGRID: BTA OIL PRODUCERS, LLC 260297 104 S Pecos Action Number: Midland, TX 79701 333798 Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure) QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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 333798

Operator:	OGRID:
BTA OIL PRODUCERS, LLC	260297
104 S Pecos	Action Number:
Midland, TX 79701	333798
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation closure report approved, release resolved. Soil impacts exceeding the reclamation standards have been left in place and are required to meet 19.15.29.13D (1) NMAC once the site is no longer reasonably needed for production or subsequent drilling ops.	5/14/2024