

July 19, 2023

#### **New Mexico Oil Conservation Division**

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

Re: Closure Request

Mesa B West – Burned Water Transfer Poly Line

Incident Number nAPP2303737335

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 the Mesa B West – Burned Water Transfer Poly Line (Site). The purpose of the excavation and soil sampling activities was to address impacts to soil resulting from a produced water release at the Site. Based on field screening activities, excavation activities, and laboratory analytical results from soil sampling events, BTA is submitting this *Closure Request*, describing remediation that has occurred and requesting no further action for Incident Number nAPP2303737335.

#### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit C, Section 7, Township 26 South, Range 33 East, in Lea County, New Mexico (32.06221°, -103.61441°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On February 5, 2023, a gas feed line ruptured and caused a fire that burned an adjacent 8-inch water transfer line, resulting in the release of approximately 56 barrels (bbls) of produced water into the surrounding right-of-way (ROW) and pasture area. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 1 bbl of produced water was recovered. BTA reported the release to the New Mexico Oil Conservation Division (NMOCD) immediately via the NMOCD permitting website and submitted a *Release Notification Form C-141* (Form C-141) on February 14, 2023. The release was assigned Incident Number nAPP2303737335.

#### SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be between 51 feet and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater is New Mexico Office of the State Engineer (NMOSE) soil boring C-04547, drilled approximately 0.8 miles southeast of the Site. The soil boring has a reported depth to groundwater of

BTA Oil Producers, LLC Closure Request Mesa B West – Burned Water Transfer Poly Line

89.5 feet bgs and a total depth of 112 feet bgs. The soil boring was subsequently plugged following approved NMOSE methods. In addition, NMOSE documents three wells, C-04485-POD 1, C-04549, and C-04537, located approximately 1 mile to 1.4 miles to the north, west, and south of the Site, respectively, all indicating regional depth to groundwater is between 51 feet and 100 feet bgs. Multiple data point exist around the Site and there are no surface features indicative of the presence of shallow groundwater. All wells used for depth to groundwater determination are depicted on Figure 1 and the associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a dry wash, located approximately 385 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

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

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the pasture area and ROW that was impacted by the release, per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation.

#### **DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS**

Between March 8 and March 10, 2023, Ensolum personnel were at the Site to complete assessment and delineation activities based on visible staining in the release area and information provided by the Form C-141. Delineation soil Samples SS01 through SS06 were collected around the release extent, at a depth of 0.5 feet bgs, to confirm the lateral extent of the release. Eleven boreholes (BH01 through BH11) were advanced via hand auger within the release extent. The boreholes were advanced to total depths ranging from 1-foot to 5.5 feet bgs. Discrete delineation soil samples were collected from each borehole at depths ranging from 0.5 feet to 5.5 feet bgs. Delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Visual observations and field screenings were logged on Lithologic Soil Sampling Logs which are included in Appendix B. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during Site assessment and a photographic log is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental

BTA Oil Producers, LLC Closure Request Mesa B West – Burned Water Transfer Poly Line

Protection Agency (EPA) Method 8021B; TPH- GRO and TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 4500.0.

Laboratory analytical results for delineation soil samples SS01 through SS06 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for boreholes BH01, BH03, and BH04, advanced within the release extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement. Laboratory analytical results for the delineation soil samples collected from boreholes BH02 and BH05 through BH11, advanced within the release extent, indicated chloride concentrations exceeding the reclamation requirement in the top 4 feet. Only borehole BH08, collected at 0.5 feet bgs and located in an area where the release pooled, contained chloride concentrations exceeding the applicable Closure Criteria. The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Appendix D. Based on laboratory analytical results for soil samples BH02 and BH05 through BH11, excavation activities were warranted.

#### **EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS**

Between April 10 and May 3, 2023, Ensolum personnel were at the Site to oversee excavation activities based on visible staining and laboratory analytical results for soil samples BH02 and BH05 through BH11. Excavation activities were performed utilizing hand shovels, hydrovac, and backhoe. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed to depths ranging from 1-foot to 3 feet bgs. Photographic documentation of the excavation activities is included in Appendix C.

Following removal of impacted and waste-containing soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewall of the excavation extent. 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. Composite soil samples FS01 through FS44 were collected from the floor of the excavation at depths ranging from 1-foot to 3 feet bgs. In areas where the excavation remained at 1-foot bgs, the sidewalls were incorporated into the composite floor samples. Composite soil samples SW01 and SW02 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 3 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

Laboratory analytical results for the excavation soil samples FS01 through FS44, SW01, and SW02 indicated all COC concentrations were compliant with the Closure Criteria and reclamation requirement. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix D.

The excavation area completed to a depth of 1-foot bgs measured approximately 7,900 square feet. The excavation area completed at depths ranging from 1.5 feet to 3 feet bgs measured approximately 900 square feet. A total of 978 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the OWL Landfill Services, LLC in Jal, New Mexico.

BTA Oil Producers, LLC Closure Request Mesa B West - Burned Water Transfer Poly Line

#### **CLOSURE REQUEST**

Site assessment and excavation activities were conducted at the Site to address the February 5, 2023, produced water release. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COCs were compliant with the Closure Criteria and reclamation requirement, where applicable. Based on the soil sample analytical results, no further remediation was required. Excavation of stained soil has mitigated impacts at this Site. BTA believes these remedial actions are protective of human health, the environment, and groundwater. As such, BTA respectfully requests closure for Incident Number nAPP2303737335. Following approval of the Closure Request, BTA will backfill the excavation and reseed the pasture and ROW area during the subsequent conducive planting season.

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

Sincerely, Ensolum, LLC

Hadlie Green **Project Geologist** 

> Kelton Beaird, BTA Nathan Sirgo, BTA

Bureau of Land Management

Daniel R. Moir, PG Senior Managing Geologist

#### Appendices:

CC:

Figure 1 Site Receptor Map

**Delineation Soil Sample Locations** Figure 2 Figure 3 **Excavation Soil Sample Locations** Table 1 Soil Sample Analytical Results Appendix A Referenced Well Records

Appendix B Lithologic/Soil Sampling Logs

Appendix C Photographic Log

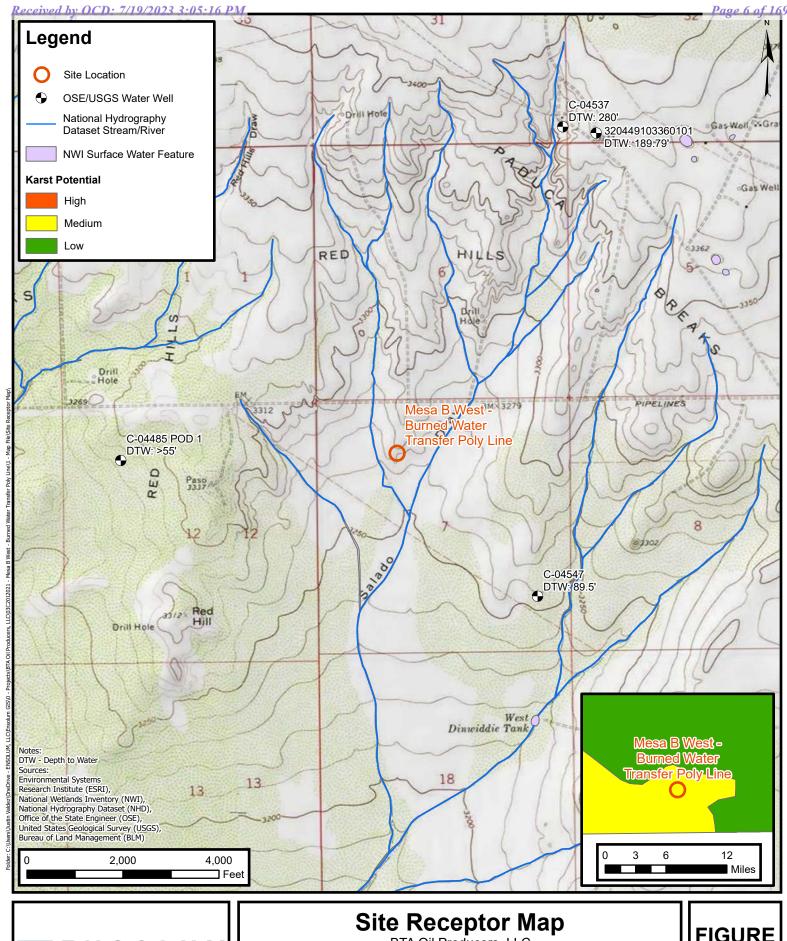
Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation

Appendix E **NMOCD Notifications** 

Appendix F Final C-141



**FIGURES** 



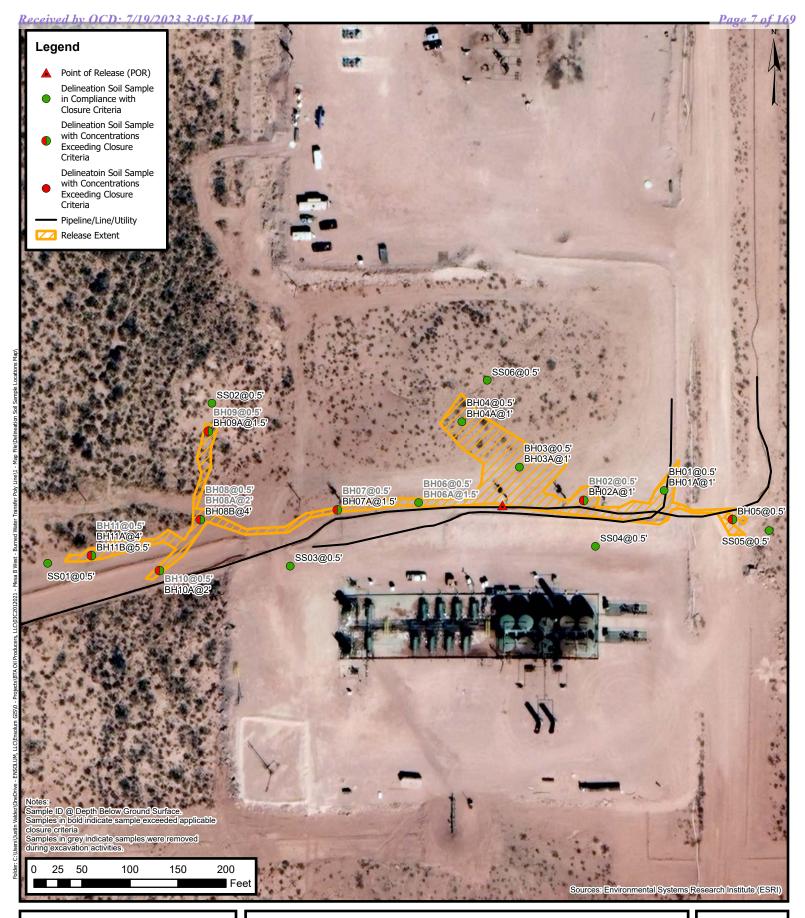


BTA Oil Producers, LLC

Mesa B West - Burned Water Transfer Poly Line
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Unit C, Sec 7, T26S R33E
Lea County, New Mexico

FIGURE

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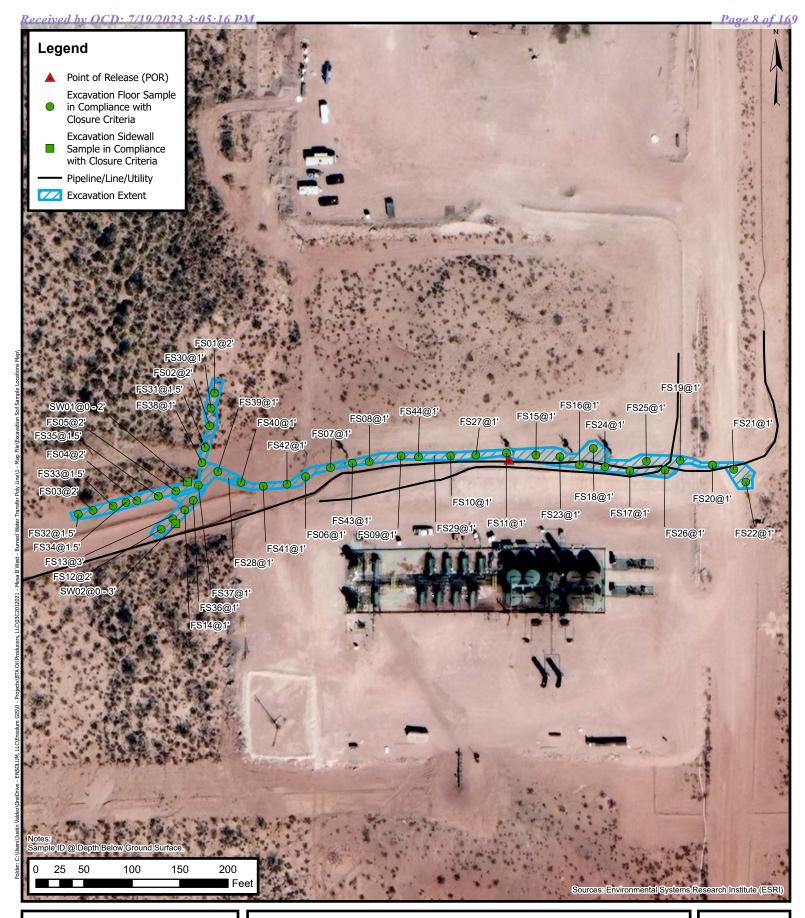


### **Delineation Soil Sample Locations**

BTA Oil Producers, LLC

Mesa B West - Burned Water Transfer Poly Line
Incident Number: nAPP2303737335
Unit C, Sec 7, T26S R33E
Lea County, New Mexico

FIGURE 2





### **Excavation Soil Sample Locations**

BTA Oil Producers, LLC

Mesa B West - Burned Water Transfer Poly Line
Incident Number: nAPP2303737335
Unit C, Sec 7, T26S R33E
Lea County, New Mexico

FIGURE 3



**TABLES** 

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# TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Mesa B West - Burned Water Transfer Poly Line BTA Oil Producers, LLC Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I C	losure Criteria (	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
				Delir	neation Soil Sa	mples				
SS01*	03/10/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS02*	03/10/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS03	03/10/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS04	03/10/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
SS05*	03/10/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS06*	03/10/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
BH01*	03/08/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
BH01A*	03/08/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
BH02*	03/08/2023	0.5	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,920
BH02A*	03/08/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
BH03*	03/08/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
BH03A*	03/08/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
BH04*	03/08/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
BH04A*	03/08/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
BH05*	03/08/2023	0.5	<0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,620
BH05A*	03/09/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
BH06*	03/08/2023	0.5	<0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,960
BH06A*	03/10/2023	1.5	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	624
BH07*	03/08/2023	0.5	<0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,970
BH07A*	03/10/2023	1.5	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0

Ensolum 1 of 4

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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	losure Criteria (	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
BH08*	03/08/2023	0.5	<0.050	<0.300	<10.0	1,130	230	1,130	1,360	10,600
BH08A*	03/10/2023	2	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,920
BH08B	03/10/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
BH09*	03/08/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,840
BH09A*	03/10/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	432
BH10*	03/08/2023	0.5	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,400
BH10A*	03/10/2023	2	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
BH11*	03/08/2023	0.5	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	6,880
BH11A	03/10/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	592
BH11B	03/10/2023	5.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
				Excava	tion Floor Soil	Samples				
FS01*	04/10/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS02*	04/10/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272
FS03*	04/10/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS04*	04/10/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
FS05*	04/10/2023	2	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS06*	04/17/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
FS07*	04/17/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS08*	04/17/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS09*	04/17/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS10*	04/17/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS11*	04/17/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
FS12*	04/18/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
FS13*	04/18/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
FS14*	05/03/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS15*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0

Ensolum 2 of 4

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NMOCD Table I C	losure Criteria (	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
FS16*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
FS17*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
FS18*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
FS19*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
FS20*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	304
FS21*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS22*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS23*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FS24*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
FS25*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FS26*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FS27*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FS28*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
FS29*	05/01/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
FS30*	05/03/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	368
FS31*	05/03/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS32*	05/03/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS33*	05/03/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS34*	05/03/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FS35*	05/03/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS36*	05/03/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS37*	05/03/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0

Ensolum 3 of 4

Received by OCD: 7/19/2023 3:05:16 PM Page 13 of 169



## TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Mesa B West - Burned Water Transfer Poly Line BTA Oil Producers, LLC Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Cl	osure Criteria (l	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
FS38*	05/03/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS39*	05/03/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS40*	05/03/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS41*	05/03/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FS42*	05/03/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS43*	05/03/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
FS44*	05/03/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
				Excavation	on Sidewall Soi	il Samples				
SW01*	04/18/2023	0 - 2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
SW02*	05/03/2023	0 - 3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112

#### Notes:

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

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

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

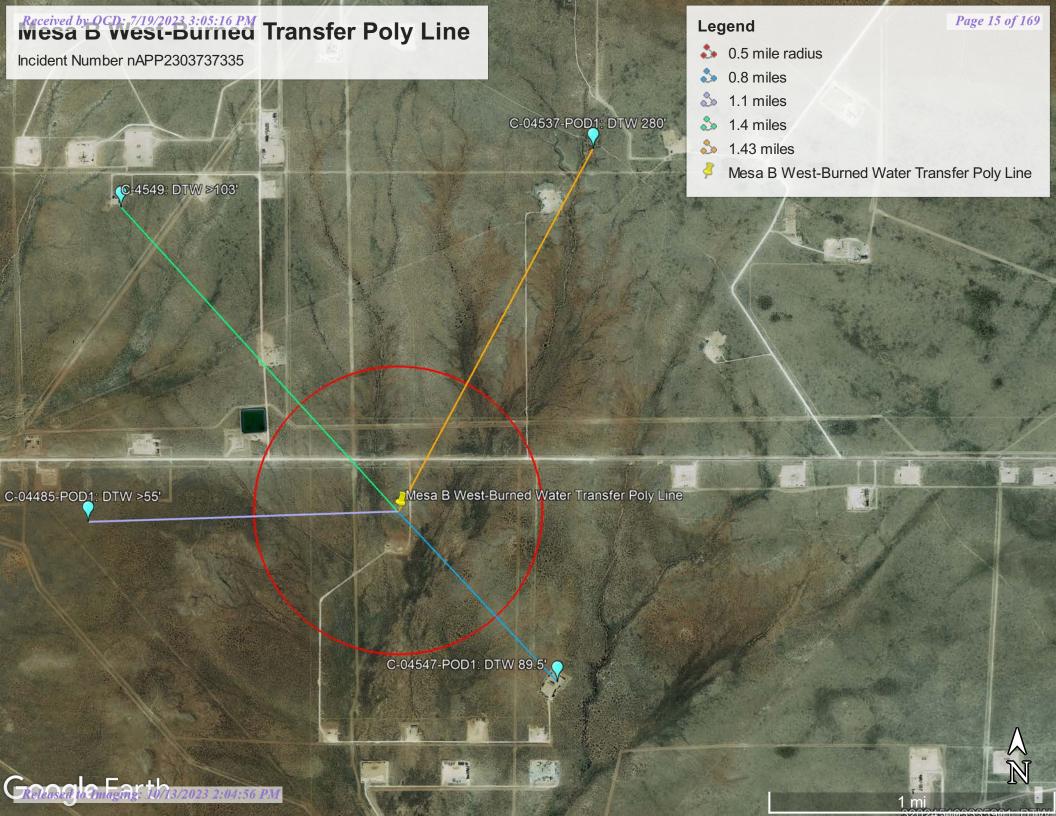
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
Grey text indicates sample was excavated

<sup>\*</sup> indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard for chloride in the top 4 feet is 600 mg/kg, reclamation standard for TPH in the top 4 feet is 100 mg/kg



**APPENDIX A** 

Referenced Well Records





OSE DII AUG 2 2021 PM4:44

	<del></del>										
NO	OSE POD NO. POD1 (M		.)		WELL TAG II n/a	ONO.	• • • • • • • • • • • • • • • • • • • •	OSE FILE NO(	S).		
OCATI	WELL OWNE BTA Oil Pr		1	•				PHONE (OPTI	ONAL)		
WELL L	WELL OWNE 104 S. Peco		ADDRESS					CITY Midland		TX 79701	ZIP
GENERAL AND WELL LOCATION	WELL	N LA	DE	GREES 32	MINUTES 3		NDS .34 N	* ACCURACY	REQUIRED: ONE TEN	TH OF A SECOND	
(ERA	(FROM GP	s)	NGITUDE	103	36	16	.96 W	* DATUM REG	QUIRED: WGS 84		
1. GE	DESCRIPTION NE SE SE		NG WELL LOCATION TO 26S R33E	STREET ADDR	ESS AND COM	IMON LANDM	iarks – pls	S (SECTION, TO	wnshjip, range) wh	ERE AVAILABLE	
	LICENSE NO		NAME OF LICENSED		ackie D. At	kins			NAME OF WELL DRI Atkins Eng	LLING COMPANY ineering Associates,	Inc.
	DRILLING ST 07/15/2		DRILLING ENDED 07/15/2021	DEPTH OF CO	MPLETED WEI ary well ma	, ,		LE DEPTH (FT) 112	DEPTH WATER FIRS	ST ENCOUNTERED (FT unknown	)
z	COMPLETED	WELL IS:	ARTESIAN	DRY HOL	E 📝 SHA	ALLOW (UNC	ONFINED)		STATIC WATER LEV	EL IN COMPLETED WI 89.5	ELL (FT)
ATIO	DRILLING FI	.UID:	<b></b> AIR	☐ MUD	ADI	DITTVES – SPE	CIFY:				
ORM	DRILLING M	ETHOD:	ROTARY	HAMMER	CAI	BLE TOOL	<b>У</b> ОТНЕ	R – SPECIFY:	Hollo	w Stem Auger	
INF	DEPTH (		BORE HOLE	CASING	MATERIAL GRADE	AND/OR		ASING	CASING	CASING WALL	SLOT
CASING INFORMATION	FROM	то	DIAM (inches)	(include each casing string, and note sections of screen)  CONNE  TYI  (add coupling			NECTION YPE ling diameter)	INSIDE DIAM. (inches)	THICKNESS (inches)	SIZE (inches)	
38	0	21	±8.5	Boring- HSA				-			
S	21	112	±3.5	Bo	ring- Air Rot	ary		-		-	
2. DRILLING &											
Ä											<del>- </del>
~				<u> </u>							-
				<u> </u>							<u> </u>
				<u> </u>							<del>-</del>
1											
				<u> </u>			-				<del> </del>
	DEPTH (	(feet bgl)	BORE HOLE		ST ANNULA				AMOUNT	метно	
ANNULAR MATERIAL	FROM	то	DIAM. (inches)	GRA	VEL PACK S	SIZE-RANG	E BY INTE	RVAL	(cubic feet)	PLACE	MENT
W.											
ÅR											
			-								
e,		-						***	ļ		
<u> </u>				<u> </u>					<u> </u>		<del></del>
	OSE INTER	NAL USE	1-1		T				0 WELL RECORD	& LOG (Version 06/	30/17)
<u> </u>	E NO. C	۲۲	1)	<b></b>	POI	D NO.	1	TRN	· \ A	041	
Loc	CATION L	<b>₩</b>	33E-0	1	<del>+-U-</del>	<u>d</u>		WELL TAG I	DNO. $NH$	PAGE	1 OF 2

F===	<del></del>						
	DEPTH (	feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZON (attach supplemental sheets to fully describe all units)	VES	WATER BEARING? (YES/NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	0	4	4	Caliche, Consolidated , White		Y √N	
	4	44	40	Sand, Fine-grained, poorly graded, with caliche gravel, Redish Bro	wn	Y √N	
	44	51	7	Clay, Stiff, Dark Brown,		Y ✓N	
	51	103	52	Sandstone, Fine-grained, poorly graded, Tan Brown		✓Y N	
						Y N	
;						Y N	
4. HYDROGEOLOGIC LOG OF WELL						Y N	
jo,						Y N	
💆						Y N	
Cic						Y N	
010						Y N	
GE						Y N	
DRC						Y N	
HY.						Y N	
4						Y N	
	···	<del>-</del>				Y N	
			<u> </u>			Y N	
						Y N	
		- ,	-			Y N	ļ
						Y N	
	) (Table 1)	022 E0 20				Y N	
		_		OF WATER-BEARING STRATA:		AL ESTIMATED L YIELD (gpm):	0.00
	PUMI	, []VI	IR LIFT	BAILER OTHER - SPECIFY:		z rieco (gpiii).	0.00
PERVISION	WELL TES	STAR	ORMATION: Te	ACH A COPY OF DATA COLLECTED DURING WELL TESTING, IN ME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN O mporary well materials removed and the soil boring plugged using ment slurry of <6.0 gallons of water per 94 lbs sack of Portland T	VER THI	E TESTING PERI	OD.  pth and landed
TEST; RIG SUPERVI			Plu	agging Record			
				VISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CO	NSTRUC	TION OTHER T	HAN LICENSEE:
S.	Shane Eldric	lge, Camer	on Pruitt, Carme	elo Trevino			
SIGNATURE	CORRECT F	ECORD OF	THE ABOVE D	IES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BE ESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL D DAYS AFTER COMPLETION OF WELL DRILLING:	LIEF, TI RECOR	HE FOREGOING D WITH THE ST	IS A TRUE AND ATE ENGINEER
6. SIGN	Jack A	tkins		Jackie D. Atkins		07/29/2021	
		SIGNAT	JRE OF DRILLE	R / PRINT SIGNEE NAME		DATE	
	OSE INTERN	NAL USE	-7		ELL REC	CORD & LOG (V	ersion 06/30/2017)
	ENO.	<del>1</del> 27	alar no	POD NO. TRN NO.	•		<u></u>
LOC	CATION '	$\psi \supset -1$	7750	1 9-4-2 WELL TAG ID NO	). N <del>/</del>	+	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

DSE DIT AUG 2 2021 PM4:44

By:

Lucas Middleton (lucas@atkinseng.com)

Status:

Signed

Transaction ID:

CBJCHBCAABAA3aQOFUKeCXoHbozKpK1XeoMdI53lwclm

## "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
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- 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

### OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

TION	CO	448 WNER NAM	5	OWL 362	WELL TAG ID NO. NA		OSE FILE N	10(s). 14485		
LOCA	KJ EN	VIRONM	ENTAL			55	PHONE (OP 214-287-5	(5)		
WELL		OSSELEY	ROAD		•		CROSS R	OADS	STATE TX 76227	ZIP
GENERAL AND WELL LOCATION	LOCA	ELL	LATITUDE	DEGREES 3548560	MINUTES SE	CONDS	* ACCUPAC	TV REQUIRES OUT TO		
ENERA	(FROM	1 GPS)	LONGITUDE	629271		N W	* DATUM RI	Y REQUIRED: ONE TE EQUIRED: WGS 84		
1. G	DESCRI	PTION RELA	TING WELL LOCATION	TO STREET ADDI	RESS AND COMMON LAN	DMARKS - PLS	S (SECTION, TO	OWNSHJIP, RANGE) W	HERE AVAILABLE	
T	LICENSE	NO. D 1186	NAME OF LICENSE		DNEY HAMMER				RILLING COMPANY	
H	DRILLING	STARTED	DRILLING ENDED		MPLETED WELL (FT)	BORE HOL	E DEPTH (FT)		VIRO-DRILL, INC.	
-	10/0	5/2020	10/06/2020		55'	5		None	RST ENCOUNTERED (FT	1
NO	COMPLET	ED WELL IS		DRY HOL	E SHALLOW (UN	CONFINED)		STATIC WATER LE	VEL IN COMPLETED W	ELL (FT)
TAN	DRILLING		☐ AIR	☐ MUD	ADDITIVES - SE	TOTAL CONTRACTOR				
		METHOD:	ROTARY	HAMMER	CABLE TOOL	XOTHER	- SPECIFY:	SA		
CASING INFORMATION	DEPTH (feet bgl)  FROM TO DIAM (inches)		CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)				CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)	
8 -	55	45		Scr	een ank	FJT		2"	2"	-010
1	45	Ó	8"	34	ank	11		11	11 7	
										8
F										8
-										Nov
								·	1-3	2
-										0
_	DEPTH (	(feet bgl)	BORE HOLE DIAM. (inches)		ANNULAR SEAL MA L PACK SIZE-RANGE			AMOUNT (cubic feet)	METHOD PLACEM	
	55	43	8"	San				10		
	13	41	8"		Plug			1	tremi	Ε
-	11	0	8"	Gro	ut'			ا00 جوا.	+	
OSE NO.	INTERN	AL USE	99		POD NO.				LOG (Version 06/30/	17)
ATIO	N Q	-2-1	1 4	N-32	SE-10	WEI	L TAG ID N		PAGE 1	OF 2

	THE STREET						The second second		
	DEPTH (	feet bgl)	THICKNESS (feet)	INCLUDE WAT	ND TYPE OF MATERIAL FER-BEARING CAVITIES Applemental sheets to fully	OR FRA	ACTURE ZONES	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING
		-							ZONES (gpm)
	0	10		Sand	+ gravel + Calich he stone			Y №	A Comment of the Comm
	10	25		gravel	+ caticl	4		Y (N)	
	25	45		Calic	he			Y 🔕	
1	45	55		Sand	stone			Y 🕅	3
	-							Y N	
4. HYDROGEOLOGIC LOG OF WELL	-							Y N	
FW						17		Y N	
000								Y N	
107								Y N	
) jo								Y N	
OTO						1.01		Y N	
CE					- vii A			Y N	
DRC								Y N	
H.								Y N	
4								Y N	
								Y N	
								Y N	
								Y N	
								Y N	
								Y N	
				17.00-17		6-11		Y N	E 0
	METHOD US	22440	0413 (17000000)	OF WATER-BEARIN	IG STRATA: THER – SPECIFY:			L ESTIMATED L YIELD (gpm):	02
z	WELL TEST	TEST R	ESULTS - ATTA	ACH A COPY OF DAT	TA COLLECTED DURING	WELL	TESTING, INCLUDIN	G DISCHARGE	METHOD
5. TEST; RIG SUPERVISION	MISCELLAN			IE, AND A TABLE SI	HOWING DISCHARGE AT	ND DRA	WDOWN OVER THE	TESTING PERI	5
5. TEST;	PRINT NAMI	E(S) OF DR	ILL RIG SUPER	VISOR(S) THAT PRO	VIDED ONSITE SUPERV	ISION O	F WELL CONSTRUC	TION OTHER T	HAN LICENSEE:
6. SIGNATURE	CORRECTR	COKD OF	THE ABOVE DE	SCRIBED HOLE AN	EST OF HIS OR HER KNO ID THAT HE OR SHE WIL PLETION OF WELL DRILL NEY HAMME	L FILE ' LING:	THIS WELL RECORD	FOREGOING IS WITH THE STA	ATE ENGINEER
75/		SIGNATU	RE OF DRILLER	PRINT SIGNEE				DATE	
FOR	OSE INTERN	AL USE					WR-20 WELL RECO	ORD & LOC (V-	reion 06/20/2017\
100000000000000000000000000000000000000	NO.				POD NO.		TRN NO.	JKD & LOU (VE	151011 00/30/2017)
LOC	ATION					WELL	TAG ID NO.		PAGE 2 OF 2

PAGE 1 OF 2

WELL TAG ID NO.

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

OSE DTT AUG 2 2021 PM2:50

7	OSE POD NO	). (WELL N	(O.)		WELL TAG ID NO	0,		OSE F	ILE NO(	S).			
GENERAL AND WELL LOCATION	PODI (M	(W-1)			n/a			C-45	49				
AT	WELL OWN							PHON	E (OPTI	ONAL)			
Ž	BTA Oil P												
Ţ,	104 S. Pec		NG ADDRESS					CITY Midla	and .		STATE TX	79701	ZIP
WE	104 5.100	08 51.						MIIdia	and		1A	79701	
	WELL		D	EGREES	MINUTES	SECO							
AL.	LOCATIO	<u> </u>	ATTTUDE	32	4	40.	92 N	1		REQUIRED: ONE TEN	TH OF A	SECOND	
Ä	(FROM GE	PS) L	ONGITUDE	103	37	53.	.68 W	* DAT	rum rec	QUIRED: WGS 84			
GE	DESCRIPTION	ON RELAT	ING WELL LOCATION T	O STREET ADDI	RESS AND COMMO	N LANDM	ARKS – PLS	S (SECT	ION, TO	WNSHJIP, RANGE) WH	ERE AVA	AILABLE	
1	NW NW N	W Sec.	11 <b>T26S R32E</b>										
	LICENSE NO		NAME OF LICENSEI	משו זוסרו ר						NAME OF WELL DR	I I ING C	YOMPANY	
	124		NAME OF EXCENSES		Jackie D. Atkin	S						g Associates, I	nc.
	DRILLING S	TARTED	DRILLING ENDED	DEPTH OF CO	MPLETED WELL (	FT)	BORE HOI	E DEPT	TH (FT)	DEPTH WATER FIRS	ST ENCO	UNTERED (FT)	
	07/14/	2021	07/14/2021	tempo	rary well mater	ial		103	. ,		n/a		
			,	f	peac.					STATIC WATER LEV			LL (FT)
Z	COMPLETE	D WELL IS	: ARTESIAN	✓ DRY HOI	LE   SHALL	OW (UNCO	ONFINED)				n/a	1	
) L	DRILLING F	LUID:	✓ AIR	MUD	ADDITI	VES – SPE	CIFY:						
CASING INFORMATION	DRILLING M	ETHOD:	ROTARY	НАММЕ	R CABLE	TOOL	✓ OTHE	R – SPEC	CIFY:	Hollo	w Sten	n Auger	
NFO	DEPTH	(feet bgl)	BORE HOLE	CASING	MATERIAL AN	D/OR	CA	CINC		CASING	CASI	ING WALL	ST OT
Ğ	FROM	то	DIAM	Gualia da	GRADE each casing string	4		SING VECTIO	ON	INSIDE DIAM.		ICKNESS	SLOT SIZE
ASI	(inches) note				each casing string sections of screen		TYPE (add coupling diameter)			(inches)	(	inches)	(inches)
S C	0	103	±8.5		Boring- HSA			-				-	
2. DRILLING &													
ITI													
DRI													
4													
				-									
				-									
				-									
. 1	DEPTH	(feet bgl)		1	ST ANNULAR S					AMOUNT		METHO	
KAI	FROM	то	DIAM. (inches)	GRA	VEL PACK SIZI	E-RANGI	BY INTE	RVAL		(cubic feet)		PLACEM	LENT
TE													
MA			<u> </u>	-							_		
[AR				-							_		
ANNULAR MATERIAL										-			
3. AN				-									-
60				+									
	OGD F			1									
FILE	OSE INTER	NAL US	E		POD N	0		Т	WR-20	) WELL RECORD &	ŁOG (	Version 06/30	)/17)
عسمه د ا					1 4 0 11					1			

LOCATION

OSE DIT ALIG 2 2021 PM2:50

								200000000			200
	DEPTH (f	eet bgl)		COLOR AN	D TYPE OF MATERIAL EN	COUN	TERED -		WA7	ER	ESTIMATED YIELD FOR
	FROM	то	THICKNESS (feet)	INCLUDE WATE	R-BEARING CAVITIES OF plemental sheets to fully de	R FRAC	TURE ZONE	8	BEAR (YES	ING?	WATER- BEARING ZONES (gpm)
	0	4	4		Caliche, Consolidated, Wh	nite			Y	√ N	
	4	9	5	Calich	e, Consolidated , with fine-g	rained, T	Can Can		Y	√N	
	9	14	5		Caliche, Consolidated, Wh	nite			Y	√N	
2	14	19	5	Calich	e, Consolidated , with fine-g	rained, T	an		Y	√N	
	19	69	50	Sand, Fine-gra	ined poorly graded, with cali	che , Ta	nish Brown		Y	√N	
7	69	79	103	Clay	y, Stiff, High Plasticity, Dark	Brown,			Y	√ N	
4. HYDROGEOLOGIC LOG OF WELL									Y	N	
OF									Y	N	
OG									Y	N	
ICL									Y	N	
OG									Y	N	
EOI									Y	N	
ROG									Y	N	
[KD]									Y	N	
4. F		*							Y	N	
									Y	N.	
									Y	N	
0		!							Y	N	
3								$\neg$	Y	N	
									Y	N	
									Y	N	
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARING	STRATA:			TOTAL	LESTIM	LATED	
	PUMF		IR LIFT		HER - SPECIFY:			WELL	YIELD	(gpm):	0.00
N.C	WELL TEST	TEST I	RESULTS - ATT I TIME, END TII	ACH A COPY OF DAT ME, AND A TABLE SH	A COLLECTED DURING VIOWING DISCHARGE AN	WELL T D DRAV	ESTING, INC	LUDING	G DISCI TESTIN	IARGE N G PERIO	ИЕТНОD, D.
TEST; RIG SUPERVISION	MISCELLA	NEOUS INF	ORMATION: Te	emporary well materia et below ground surfa	ls removed and the soil b	oring ba	ackfilled usir from ten fee	ng drill ( t below	cuttings ground	from tot surface	al depth to ten to surface.
ESI	PRINT NAM	E(S) OF DE	RILL RIG SUPER	VISOR(S) THAT PRO	VIDED ONSITE SUPERVIS	SION OF	WELL CON	STRUC'	TION O	THER TH	AN LICENSEE:
5. 1			on Pruitt, Carm			-					
TURE	CORRECT F	ECORD O	F THE ABOVE I	ESCRIBED HOLE AN	EST OF HIS OR HER KNO D THAT HE OR SHE WILL PLETION OF WELL DRILL	LFILE	GE AND BEL THIS WELL F	IEF, THE	E FORE WITH	GOING I THE STA	S A TRUE AND ATE ENGINEER
6. SIGNATURE	Jack A	tkins		Jac	ckie D. Atkins	_			07/29	/2021	
		SIGNAT	URE OF DRILLE	R / PRINT SIGNEE I	NAME					DATE	
FΩI	R OSE INTERI	NALUSE					WR-20 WE	LL REC	ORD & 1	LOG (Vei	rsion 06/30/2017)
	E NO.				POD NO.		TRN NO.				
LO	CATION					WELL	TAG ID NO.				PAGE 2 OF 2



### PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

_	ENERAL / WELL OWNERSHIP:			
State	Engineer Well Number: C-4549-POD1			
Well	owner: BTA Oil Producers		Phone No.:	432.312.2203
Maili	ng address: 104 S. Pecos St.			
City:	Midland	State:	Texas	Zip code:
	ELL PLUGGING INFORMATION:  Name of well drilling company that plu	and walls	Jackie D. Atkins ( Atkins Engine	eering Associates Inc.)
1)				
2)	New Mexico Well Driller License No.:	1249		Expiration Date: 04/30/23
3)	Well plugging activities were supervised Shane Eldridge, Cameron Pruitt, Carme		owing well driller(s)/rig superv	isor(s):
4)	Date well plugging began: 07/19/202	1	Date well plugging conclu	nded: _07/19/2021
5)	GPS Well Location: Latitude: Longitude: _			0.92 sec 3.68 sec, WGS 84
6)	Depth of well confirmed at initiation of by the following manner: weighted tape		:103 ft below ground l	evel (bgl),
7)	Static water level measured at initiation		3	
8)	Date well plugging plan of operations w			
9)	Were all plugging activities consistent v differences between the approved plugg	vith an appro ing plan and	oved plugging plan? Yes I the well as it was plugged (att	If not, please describe ach additional pages as needed):

Version: September 8, 2009

Page 1 of 2

OSE DIT AUG 2 2021 PM2:50

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

#### For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging <u>Material Used</u> (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement  Method (tremie pipe, other)	Comments  ("casing perforated first", "open annular space also plugged", etc.)
-	0-10' Hydrated Bentonite	Approx. 15.6 gallons	15 gallons	Augers	
-	10'-103' Drill Cuttings	Approx. 148 gallons	148 galions	Boring	
-					
-					
3 <del></del>					
=					
2		MULTIPLY E cubic feet x 7.4 cubic yards x 201.5	3Y AND OBTAIN 1805 = gallons 97 = gallons	я	

#### III. SIGNATURE:

I, Jackie D. Atkins	say	that	I am	familia	with	the 1	rules of	the	Office	of the	State
Engineer pertaining to the plugging of wells and that ear are true to the best of my knowledge and belief.	ch a	nd al	of th	e statemo	ents in	this l	Plugging	g Reco	ord and	attach	ments
Jack Atki	is								07/2	28/202	!1

Signature of Well Driller

Version: September 8, 2009 Page 2 of 2

Date

## 2021-07-28C-4549-POD1\_Plugging Record-forsign

Final Audit Report 2021-07-29

Created: 2021-07-29

By: Lucas Middleton (lucas@atkinseng.com)

Status: Signed

Transaction ID: CBJCHBCAABAAiFUITUMQvUeHWAgcMsacioucKnSt5mzA

### "2021-07-28C-4549-POD1\_Plugging Record-forsign" History

- Document created by Lucas Middleton (lucas@atkinseng.com) 2021-07-29 8:42:26 PM GMT- IP address: 69.21.248.123
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- Email viewed by Jack Atkins (jack@atkinseng.com) 2021-07-29 8:44:10 PM GMT- IP address: 64.90.153.232
- Document e-signed by Jack Atkins (jack@atkinseng.com)

  Signature Date: 2021-07-29 8:44:29 PM GMT Time Source: server- IP address: 64.90.153.232
- Agreement completed. 2021-07-29 - 8:44:29 PM GMT





05E 0T JUN 21 2021 MI 0713

NON	OSE POD NO. (WELL NO.)  C-4537  OSE POD NO. (WELL TAG ID NO. 20E6C						OSE FILE NO(S). C-4537							
OCAT	WELL OWNER NAME(S) BASIN PROPERTIES RANCHES LLC							PHONE (OPTIONAL)						
WELL I	WELL OWNER MAILING ADDRESS 3300 N A STREET, BLDG 1, STE 220								CITY STATE MIDLAND TX					
GENERAL AND WELL LOCATION	WELL LOCATION LA' (FROM GPS)		TTUDE	DEGREES MINUTES SECONDS 32 04 50.8  WIDE 103 36 10.7			8 <sub>N</sub>	* ACCURACY REQUIRED: ONE TENTH OF A SECOND  * DATUM REQUIRED: WGS 84						
1. GENF	DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE													
	LICENSE NO. NAME OF LICENSED DRILLER  WD1706 Bryce Wallace NAME OF WELL DRILLING COMPANY Elite Drillers Corporation													
DRILLING STARTED DRILLING ENDED DEPTH OF COMPLETED WELL (FT) BORE HOLE DEPTH (FT) DEPTH 06/11/21 06/12/21 500 500									DEPTH WATER FIR	DEPTH WATER FIRST ENCOUNTERED (FT) 280				
NC	COMPLETED WELL IS: ARTESIAN DRY HOLE SHALLOW (UNCONFINED)								EL IN COMPLETED WELL (FT) 280					
VIIC	DRILLING FL	UD:	✓ AJR	☐ MUD	ADDITIV	ES – SPEC	IFY:							
)RM	DRILLING METHOD:													
2. DRILLING & CASING INFORMATION	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)		and	CASING CONNECTION TYPE (add coupling diameter)		CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)			
C/2	0	20	12 3/4	STEEL			N/A		8.28	.337	-			
NG.	0	300	7 7/8	SDR17 PVC			SF	LINE	4.3	SDR17				
RILL	300 500 77/8			SDR17 PVC SP.			LINE	4.3	SDR17	.032				
2. D					····				<u>.                                    </u>					
	, , , , , , , , , , , , , , , , , , ,			ļ							ļ			
				<del> </del>			<del></del>							
	рерти (	feet hall		<del></del>	TE ANDRES AD CT	747.3547	replat :	ND	11/01/17					
¥	DEPTH (feet bgl) BORE HOLE FROM TO DIAM. (inches)			LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL				AMOUNT (cubic feet)		METHOD OF PLACEMENT				
ERI	0	20	12 3/4	CEMENT				10	TOP F	TOP FILL				
5	0	20								P FILL				
R N	300 500 77/8			8/16 SILICA SAND				46	TOP F	ILL				
ANNULAR MATERIAL														
N N														
સં														
FOR	OSE INTER	NAL USE						WR-20	WELL RECORD	& LOG/Version 06/3	0/17)			

POD NO.

TRN NO.
WELL TAG ID NO.

PAGE 1 OF 2

FILE NO.

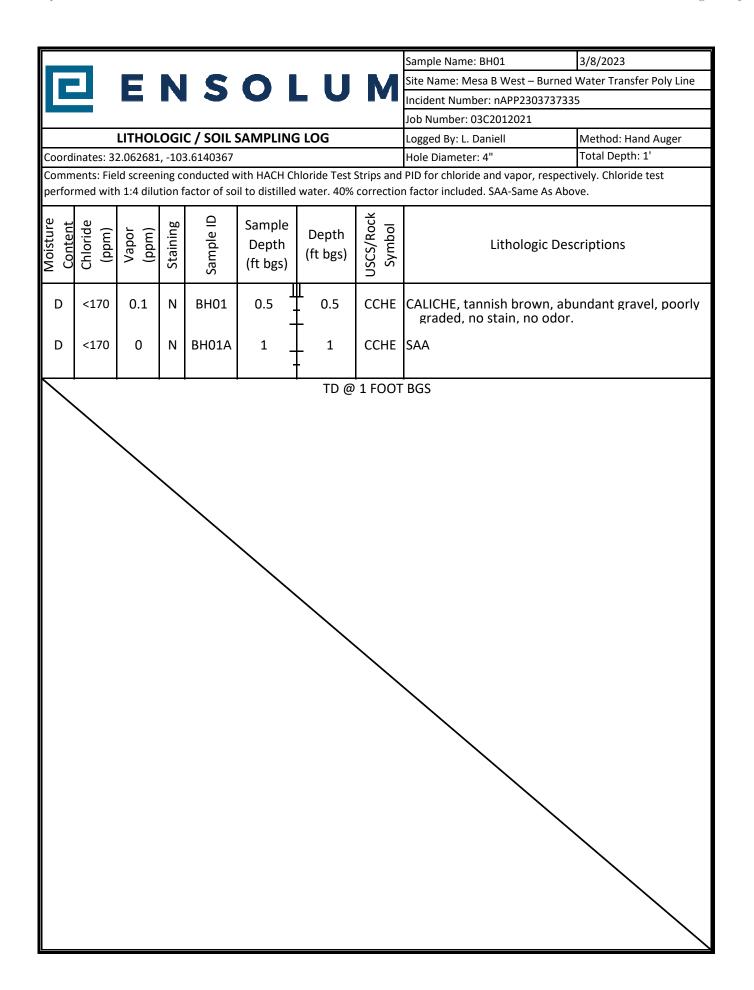
Page 27 of 169
USE OIL JUN 21 2021 MISSIS

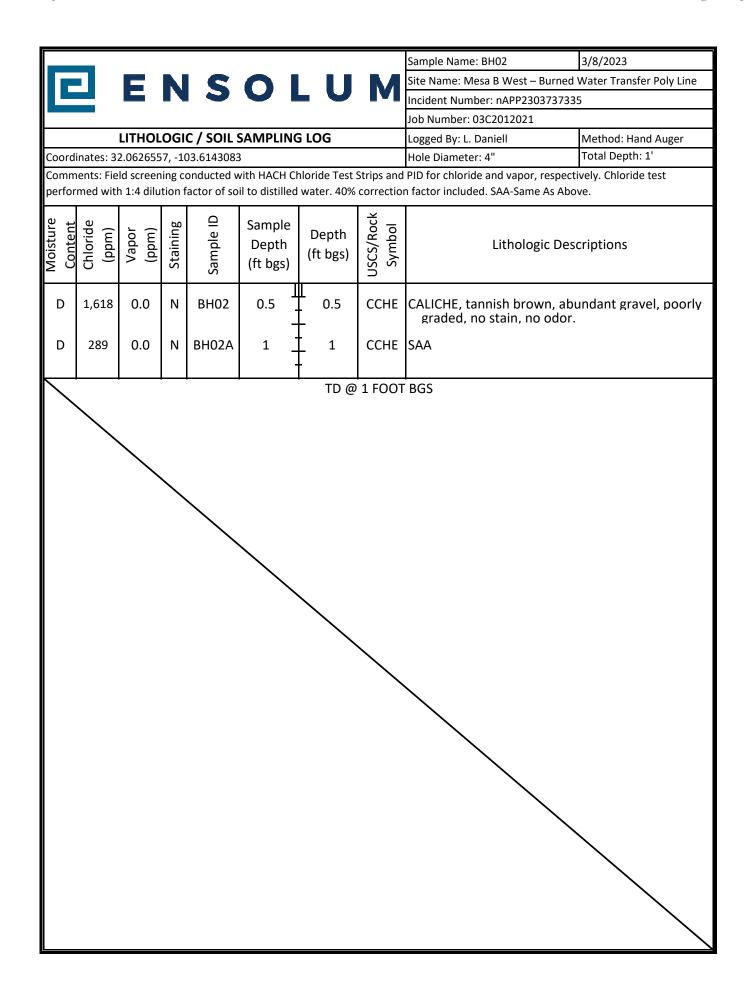
		5, 201, 201, 201			tion in the second of the second							
	DEPTH (	feet bgl)		COLOR AN	ID TYPE OF MATERL	AL EN	COUN	TERED -		WA	TER .	ESTIMATED
			THICKNESS	INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES					s	BEAR		YIELD FOR WATER-
	FROM	OM TO (feet) (attach supplemental sheets to fully describe all units)								(YES / NO)		BEARING ZONES (gpm)
	0	5	5		SAND					Y	✓ N	
	5	25	20		CALICHE					Y	√ N	
	25	220	195		RED CLAY & RED SI	LTST	ONE			Y	√ N	
	220	340	120		RED SANDSTO	ONE				<b>√</b> Y	N	5.00
	340	500	160	RE	D SANDSTONE & REI	D SILT	STON	E		Y	✓ N	
1										Y	N	
4. HYDROGEOLOGIC LOG OF WELL										Y	N	
OF.								······································		Y	N	
00					······					Y	N	
ICI				<del> </del>						Y	N	
507										Y	N	
EO										Y	N	
ROC										Y	N	
QXII										Y	N	
4										Y	N	· ·
				,						Y	N	
										Y	N	
					,	,				Y	N	
										Y	N	
										Y	N	
										Y	N	
	METHOD L	SED TO ES	STIMATE YIELD	OF WATER-BEARIN	G STRATA:					L ESTIN		·
	PUM	P 🗸 A	IR LIFT	BAILER O	THER - SPECIFY:				WEL	L YIELD	(gpm):	5.00
RVISION	WELL TES	STAR	T TIME, END TII	ACH A COPY OF DA ME, AND A TABLE S	TA COLLECTED DUR HOWING DISCHARG	ING W E AND	ELL T	ESTING, INC WDOWN OV	CLUDIN ER THE	NG DISC E TESTIN	HARGE I IG PERIC	METHOD, DD.
TEST; RIG SUPERVI	MISCELLA	NEOUS INF	FORMATION:									
5. TEST	PRINT NAM	IE(S) OF D	RILL RIG SUPER	VISOR(S) THAT PRO	VIDED ONSITE SUPE	ERVISI	ON OI	WELL CON	ISTRUC	TION O	THER TH	IAN LICENSEE:
SIGNATURE	CORRECT	RECORD O	F THE ABOVE D	ESCRIBED HOLE AN O DAYS AFTER COM	EEST OF HIS OR HER I ID THAT HE OR SHE PLETION OF WELL D	WILL	FILE T	E AND BELI HIS WELL R	EF, TH	O WITH '	THE STA	A TRUE AND TE ENGINEER
6. SIC	Bryce Wallace 06/16/2021											
		SIGNAT	URE OF DRILLE	R / PRINT SIGNEE	NAME						DATE	
EΩI	R OSE INTER	NAL LICE	<u></u>					WD 20 WD	I I DEC	ODD 6	LOC (V-	rsion 06/20/2017\
	E NO.	- 4F	37		POD NO.	<i></i>		TRN NO.		953		rsion 06/30/2017)
LO	CATION	- • · · · · ·			<u> </u>	Ή,	WELL	TAG ID NO.			<u></u>	PAGE 2 OF 2
					<del></del>							· · · · · · · · · · · · · · · · · · ·

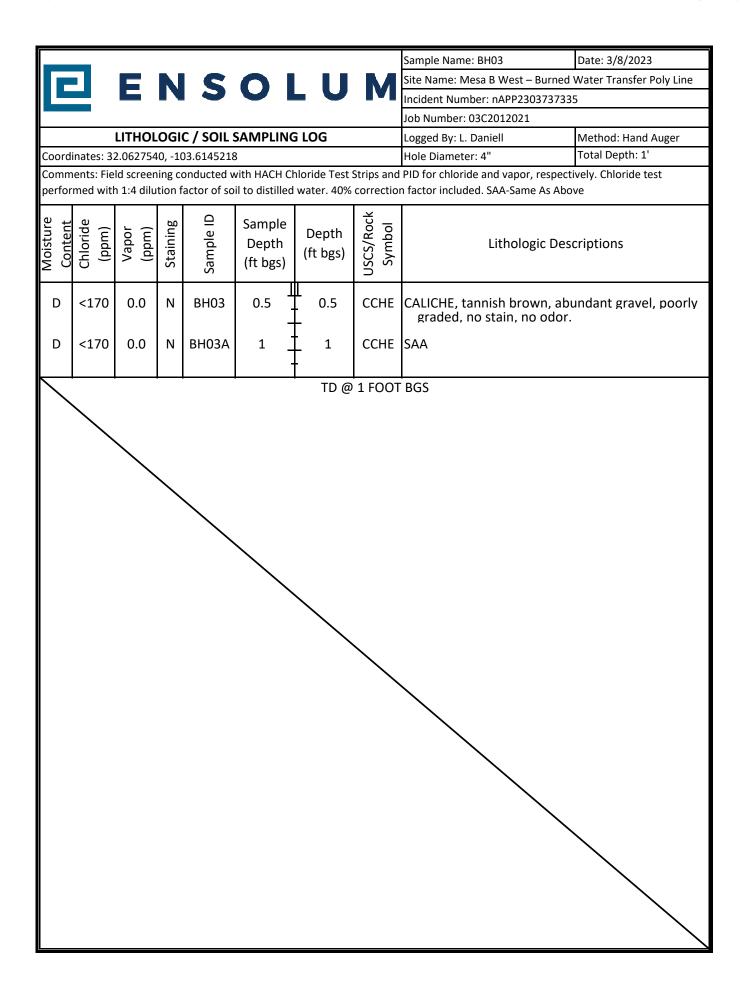


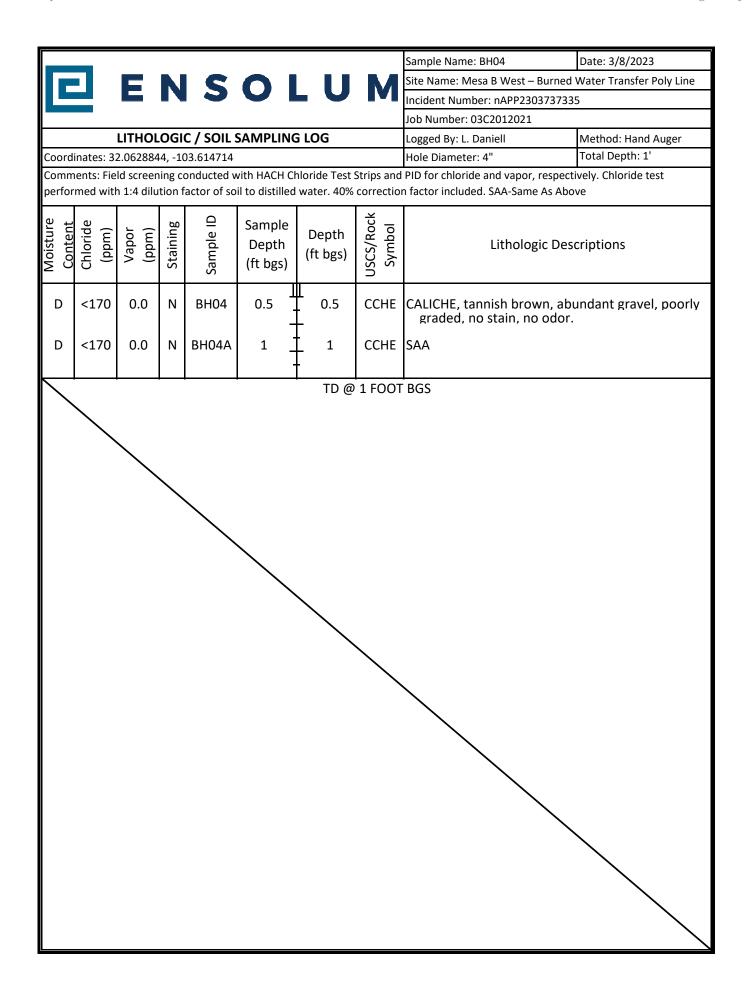
**APPENDIX B** 

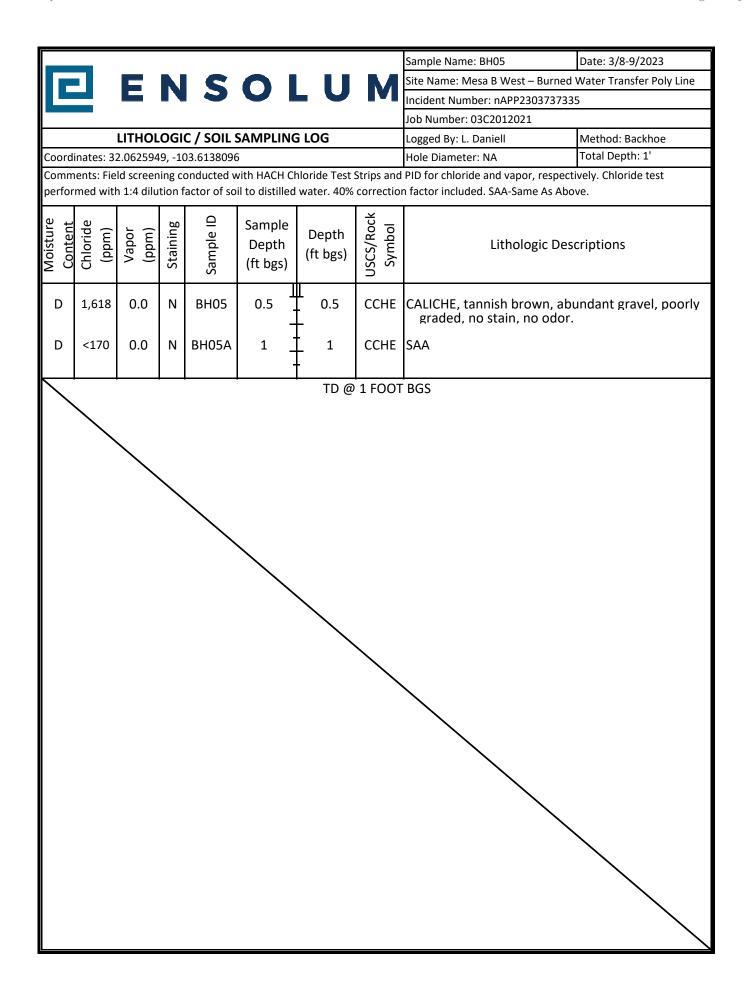
Lithologic Soil Sampling Logs

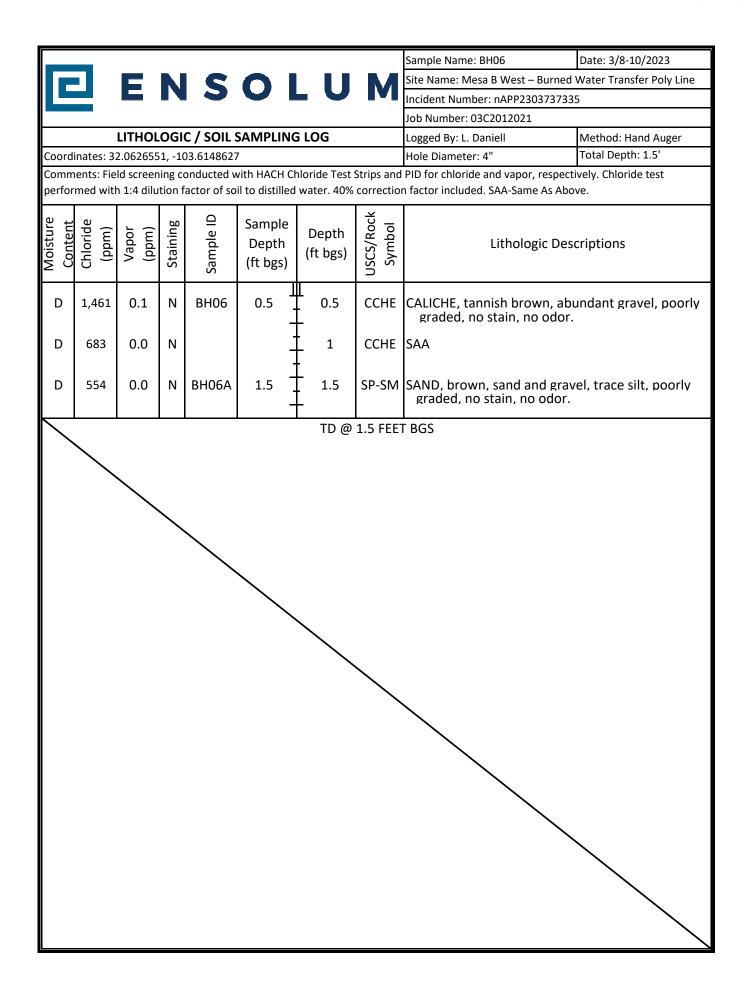


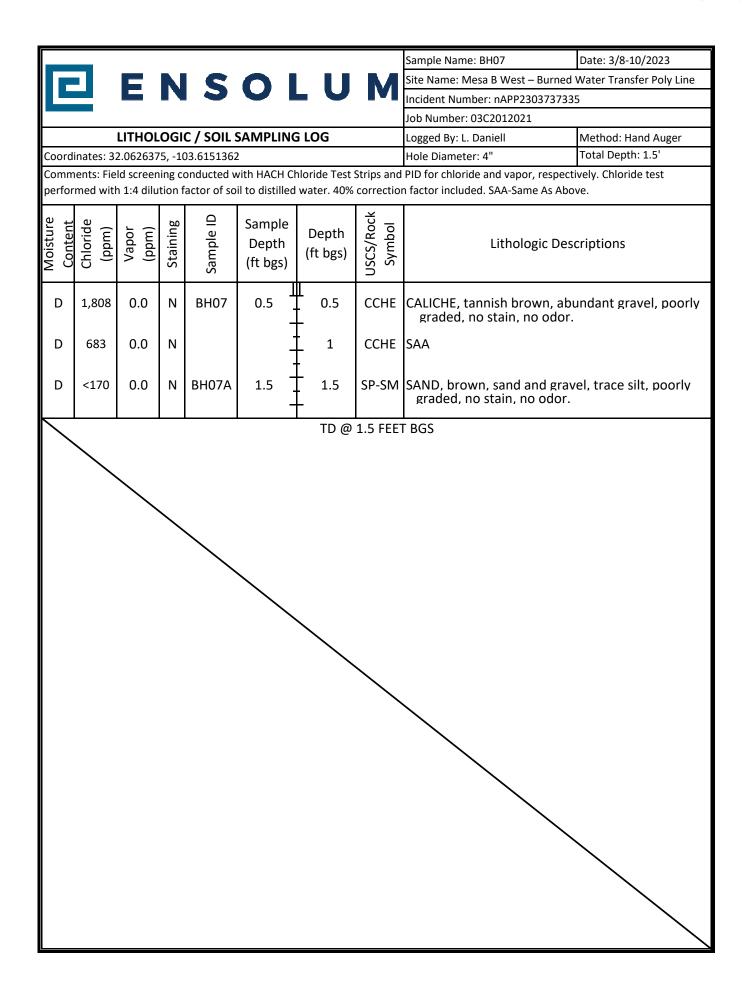


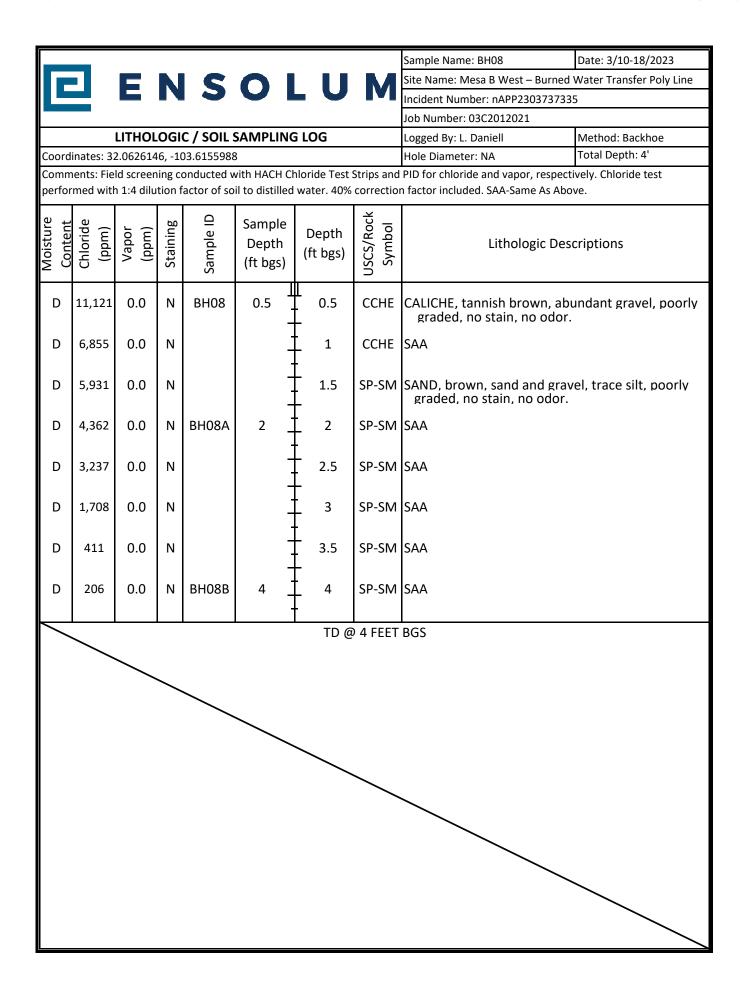


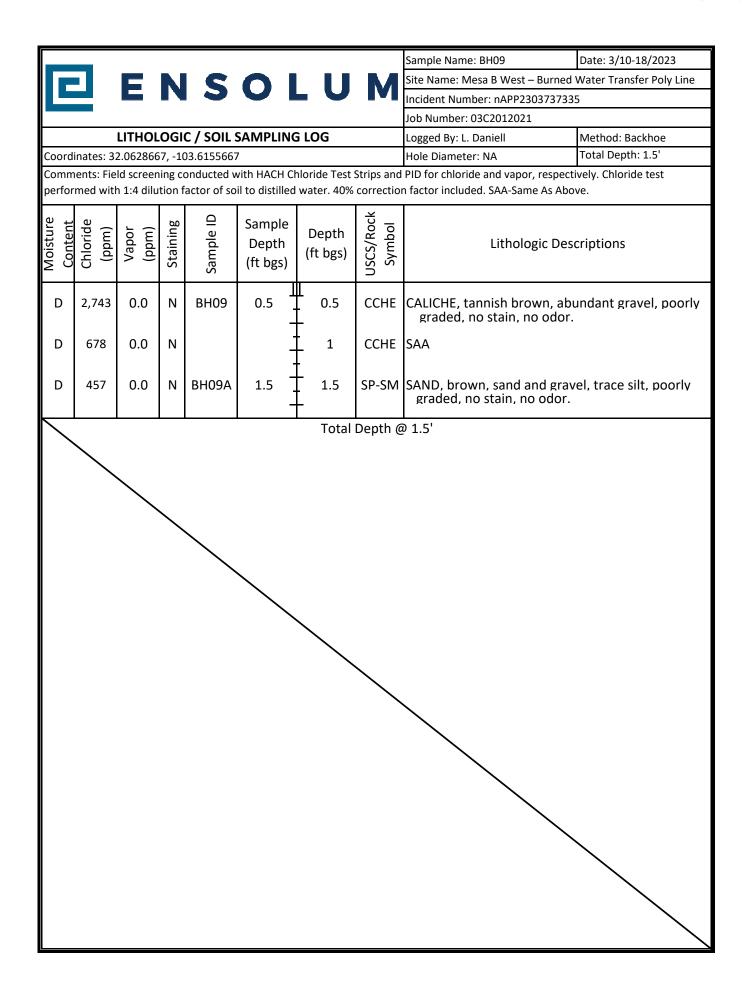


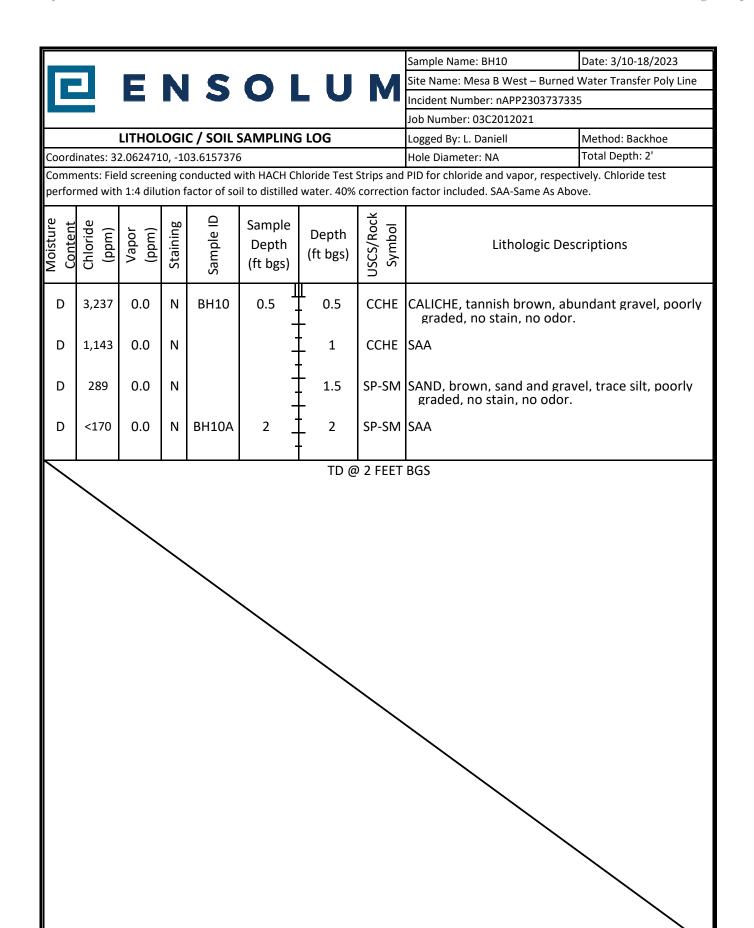


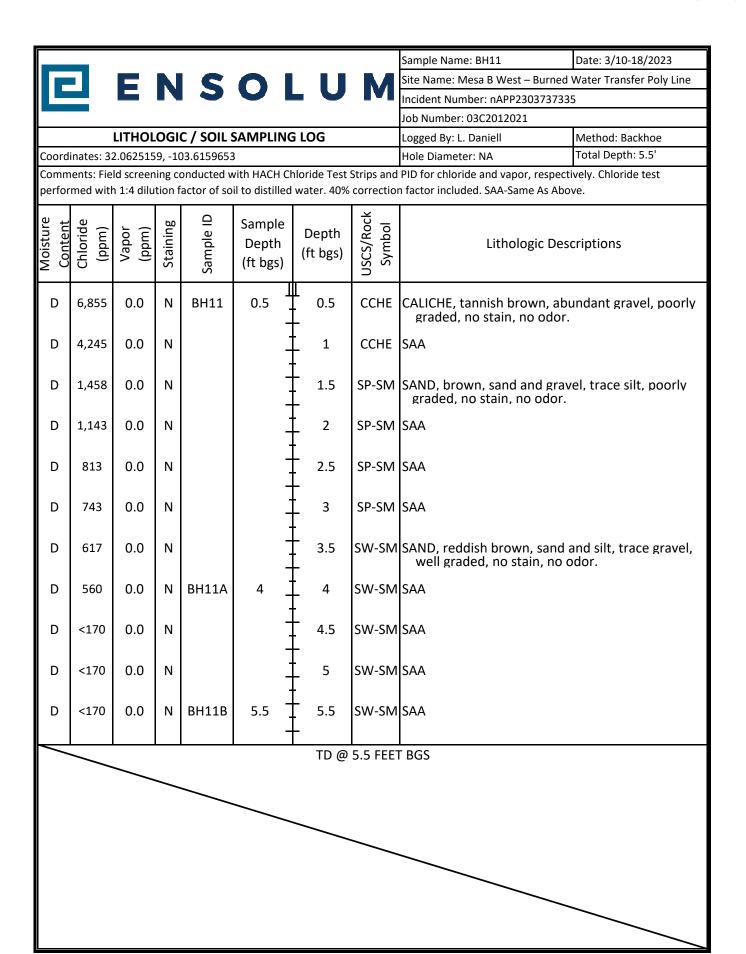














APPENDIX C

Photographic Log



# **Photographic Log**

**BTA Oil Producers** 

Mesa B West - Burned Water Transfer Poly Line Incident Number NAPP2303737335



Photograph: 1

Description: Initial release extent

View: West



Photograph: 2

Date: 2/5/2023

Description: Excavation activities

View: South



Photograph: 3 Date: 4/18/2023

Description: Excavation activities

View: Southwest



Photograph: 4 Date: 4/18/2023

Description: Excavation activites

View: West



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



March 17, 2023

HADLIE GREEN
ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD, NM 88220

RE: MESA B EAST/WEST NGL WATER TRANSFER LINE

Enclosed are the results of analyses for samples received by the laboratory on 03/15/23 14:30.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> 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.

Celey D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Sampling Date: 03/08/2023

Reported: 03/17/2023 Sampling Type: Soil

Project Name: MESA B EAST/WEST NGL WATER TRANS Sampling Condition: Cool & Intact
Project Number: 03C2012018 Sample Received By: Shalyn Rodriguez

Project Location: BTA 32.062595, -103.614578

## Sample ID: BH - 01 ( 0.5') (H231182-01)

BTEX 8021B	mg/kg Analyzed By: JH/			d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	106	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/16/2023	ND	416	104	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	93.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

## Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



## Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

# Sample ID: BH - 01 A ( 1') (H231182-02)

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	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	106	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/16/2023	ND	448	112	400	3.64	
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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	101	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	112	% 49.1-14	8						

## Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



#### Analytical Results For:

**ENSOLUM** HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Name: Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578 Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Shalyn Rodriguez

#### Sample ID: BH - 02 ( 0.5') (H231182-03)

BTEX 8021B	mg/	/kg	Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1920	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	100 5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	111 9	% 49.1-14	8						

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Celey D. Keene



#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

#### Sample ID: BH - 02 A ( 1') (H231182-04)

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	a By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	97.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	108	% 49.1-14	8						

Analyzed By: 1H /

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Celey D. Keene



## Analytical Results For:

**ENSOLUM** HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Name: Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578 Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Shalyn Rodriguez

## Sample ID: BH - 03 ( 0.5') (H231182-05)

BTEX 8021B	mg/	kg	Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 9	71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	93.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	103 9	6 49.1-14	8						

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Celey D. Keene



#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

## Sample ID: BH - 03 A ( 1') (H231182-06)

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	a By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	97.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	108	% 49.1-14	8						

Analyzed By: 1H /

Cardinal Laboratories \*=Accredited Analyte

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#### Analytical Results For:

**ENSOLUM** HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported:

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Name: Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578 Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Shalyn Rodriguez

## Sample ID: BH - 04 ( 0.5') (H231182-07)

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	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	93.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	103 9	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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#### Analytical Results For:

**ENSOLUM** HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Name: Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578 Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Shalyn Rodriguez

#### Sample ID: BH - 04 A ( 1') (H231182-08)

BTEX 8021B	mg/	'kg	Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	91.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	101 9	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

## Sample ID: BH - 05 ( 0.5') (H231182-09)

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	a By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1620	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	94.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

Analyzed By: 1H /

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/09/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

#### Sample ID: BH - 05 A ( 1.5') (H231182-10)

RTFY 8021R

BIEX 8021B	mg	/ <b>kg</b>	Anaiyze	ea By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/16/2023	ND	448	112	400	3.64	
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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	90.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	102	% 49.1-14	8						

Applyzed By: 1H /

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

## Sample ID: BH - 08 ( 0.5') (H231182-11)

Project Name:

RTFY 8021R

BIEX 8021B	mg	/кд	Analyze	a By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10600	16.0	03/16/2023	ND	448	112	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	1130	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	230	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	109	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	150	% 49.1-14	8						

Applyzod By: 1H /

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

#### Sample ID: BH - 09 ( 0.5') (H231182-12)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2840	16.0	03/16/2023	ND	448	112	400	3.64	
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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	105	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	116	% 49.1-14	'8						

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#### Analytical Results For:

**ENSOLUM** HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported:

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Name: Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578 Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Shalyn Rodriguez

## Sample ID: BH - 10 ( 0.5') (H231182-13)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3400	16.0	03/16/2023	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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	112 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	122 9	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

## Sample ID: BH - 11 ( 0.5') (H231182-14)

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	a By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6880	16.0	03/16/2023	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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	104	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	114	% 49.1-14	8						

Analyzed By: 1H /

Cardinal Laboratories \*=Accredited Analyte

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

## Sample ID: SS - 01 @ 0.5' (H231182-15)

Project Name:

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	a By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/16/2023	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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	103	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	112	% 49.1-14	8						

Analyzed By: 1H /

Cardinal Laboratories \*=Accredited Analyte

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 Sampling Type:
MESA B EAST/WEST NGL WATER TRANS Sampling Condition:

Analyzed By: 1H /

Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sample Received By:

Cool & Intact Shalyn Rodriguez

Soil

#### Sample ID: SS - 02 @ 0.5' (H231182-16)

Project Name:

RTFY 8021R

B1EX 8021B	mg	/ <b>kg</b>	Anaiyze	ea By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/16/2023	ND	448	112	400	3.64	
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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	92.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.8	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

## Sample ID: SS - 03 @ 0.5' (H231182-17)

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	03/16/2023	ND	1.72	86.2	2.00	12.4	
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/16/2023	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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	96.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

#### Sample ID: SS - 04 @ 0.5' (H231182-18)

Project Name:

RTFY 8021R

B1EX 8021B	mg/	кg	Апануге	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 5	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	03/16/2023	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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	85.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	93.3	% 49.1-14	8						

Applyzod By: 14

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

#### Sample ID: SS - 05 @ 0.5' (H231182-19)

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	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	100	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/16/2023	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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	95.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

#### Sample ID: SS - 06 @ 0.5' (H231182-20)

Project Name:

RTFY 8021R

B1EX 8021B	mg,	кg	Апануге	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/16/2023	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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	92.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	100	% 49.1-14	8						

Applyzod By: 14

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#### Analytical Results For:

**ENSOLUM** HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578 Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Shalyn Rodriguez

# Sample ID: BH - 11 A ( 4') (H231182-21)

Project Name:

BTEX 8021B	mg/	kg	Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	71.5-13	4						
Chloride, SM4500CI-B	mg/	kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	03/16/2023	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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	100 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	111 9	6 49.1-14	8						

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

## Sample ID: BH - 11 B ( 5.5') (H231182-22)

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	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.6	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/16/2023	ND	416	104	400	3.92	
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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	94.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	104 9	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

# Sample ID: BH - 09 A ( 1.5') (H231182-23)

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	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	03/16/2023	ND	416	104	400	3.92	
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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	98.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

# Sample ID: BH - 07 A ( 1.5') (H231182-24)

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	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/16/2023	ND	416	104	400	3.92	
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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	103	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	111 9	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

## Sample ID: BH - 08 A ( 2') (H231182-25)

Project Name:

RTFY 8021R

BIEX 8021B	mg	/ <b>kg</b>	Anaiyze	а ву: ЈН					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	106	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3920	16.0	03/16/2023	ND	416	104	400	3.92	
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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	99.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	108	% 49.1-14	8						

Applyzod By: 14

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 Sampling T MESA B EAST/WEST NGL WATER TRANS Sampling C

Project Name: MESA B EAST Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

# Sample ID: BH - 06 A ( 1.5') (H231182-26)

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	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	110	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	03/16/2023	ND	416	104	400	3.92	
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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	103	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	112	% 49.1-14	8						

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#### Analytical Results For:

**ENSOLUM** HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported:

03/17/2023 MESA B EAST/WEST NGL WATER TRANS

Project Name: Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578 Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Shalyn Rodriguez

# Sample ID: BH - 10 A ( 2') (H231182-27)

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	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	03/16/2023	ND	416	104	400	3.92	
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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	82.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.0	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

03/17/2023 Sampling T MESA B EAST/WEST NGL WATER TRANS Sampling C

Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/10/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

#### Sample ID: BH - 08 B ( 4') (H231182-28)

Project Name:

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	110	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	03/16/2023	ND	416	104	400	3.92	
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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	94.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	103	% 49.1-14	8						

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#### Analytical Results For:

**ENSOLUM** HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578 Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Shalyn Rodriguez

## Sample ID: BH - 06 ( 0.5') (H231182-29)

Project Name:

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	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1960	16.0	03/16/2023	ND	416	104	400	3.92	
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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	99.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	106	% 49.1-14	8						

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# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 03/15/2023 Reported: 03/17/2023

MESA B EAST/WEST NGL WATER TRANS

Project Number: 03C2012018

Project Location: BTA 32.062595, -103.614578

Sampling Date: 03/08/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

# Sample ID: BH - 07 ( 0.5') (H231182-30)

Project Name:

RTFY 8021R

BIEX 8021B	mg	/ <b>kg</b>	Anaiyze	а ву: ЈН					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/16/2023	ND	2.05	103	2.00	4.16	
Toluene*	<0.050	0.050	03/16/2023	ND	1.90	95.2	2.00	3.10	
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.91	95.7	2.00	3.92	
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.83	97.1	6.00	3.66	
Total BTEX	<0.300	0.300	03/16/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	110	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	ed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1970	16.0	03/16/2023	ND	416	104	400	3.92	
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	03/16/2023	ND	174	86.9	200	3.93	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	187	93.3	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	101	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	110	% 49.1-14	8						

Applyzod By: 14

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# **Notes and Definitions**

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.

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

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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

\*\*\* Insufficient time to reach temperature.

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

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

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Celeg D. Freene

PM

7/19/2023

Received by OCD:

Page 33 of 35

# 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		ANALYSIS RE	QUEST
Project Manager	Hadlie Green		P.O. #:				
Address:	1140110 0100		Company: F	STA Oil			
City:	State:	Zip:	Attn: B				
	25578895 Fax#:	•		15 Pecos St			
Project #:	Project Own	ner:	City: Mid				
	Mesa B East/Wes		State:TX	Zip: 7970)			
Project Location	: 32.062595,-103.	(14578	Phone #: 43	523122203			
Sampler Name:	L. Daniell	0.1010	Fax #:		2		
FOR LAB USE ONLY	Citamen	MATRIX	PRESERV.	SAMPLING		3	
Lab I.D. H931182	Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	OTHER: ACID/BASE: ICE / COOL OTHER:	DATE TIME	BTE TPH		
	BH-DI (0.51)	6 1 X	X	3/8/23 10:30	XXX		
a	BH-019 (1')	GIX	X	3/8/23 10:40	XXX		
an 45 47	BH-02 (0.5') BH-02a (1')	GIX	X	3/8/23 11:00	XXX		
4	BH-02a (1')	GIX	X	3/8/23 11:10	XXX		
5	BH-03 (6.5')	GIX	X	3/8/23 13:01			
u	BH-039 (1)	GIX	X	3/8/23 13:10	XXX		
	BH-04 (0.51)	GIX	X	3/8/23 13:50	XXX		
8	1011 0 1	GIX	X	3/8/23 13:30	XXX		
9	BH-05 (6.5')	GIX	X	3/9/23 13:40	XXX		
PLEASE NOTE: Liability and	BH-05a (1.5')	GILLX	t ov but abail be feethed	3/4/23 14:05	XXXX		

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 the client for the analyses. All claims including those for negligence and any other cause whatsoover 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 demages, 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 p	erformance of services hereunder by Cardinal, regardle	as of whether such claim is based upon r	my of the above stated reasons or otherwise.		10.00	I DL #-
Relinquished By:	Date: 3/9/23 Receive	d By:	Verbal Result:	☐ Yes ☐ No	-	I Phone #:
	V23/8/72		All Results are e	mailed. Please pro	vide E	mail address:
(9)	Time: 19:08		hare	en@ensol	un	Con
Relinquished By:	Date SISIA3 Receive	od Rich	REMARKS?			
Delivered By: (Circle One)	Observed Temp. °C/. 2:		HECKED BY: Turnaround Tim	e: Standard Rush	R	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C	☐ Yes ☐ Yes ☐ No ☐ No	Thermometer ID Correction Factor			☐ Yes ☐ Yes ☐ No ☐ Corrected Temp. °C
FORW-000 K 3.3 07716/22		The same of the sa		COST SET NEW C		

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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	Ensolum, LLC									E	3//	LL TO							ANA	LYSI	SR	FOLI	FST		_	_
Project Manage									P.O.	#:							T		T	T	T	1	T	_		$\top$
Address: 601	N. Marienfeld St. STE	400							Com	pany:	i	3TA	0:1													- 1
City: Midland		State: TX	Zi	p:	797	01			Attn:	r	5	T 1	211				1							1		
Phone #:		Fax #:							Addr	ess.	fr	20 6	0													
Project #:		Project Owne	r:						City:		1	land	Tece	۲												
Project Name:	Mess B	Falling		LH		-0	J.	00	State	M			2	Н									1			
Project Location	Mesa B 1: 32,0629	95 (0)	-> 1	(4)	tar	1.5te	ru	no	olate	T		-	710	H			01									
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FOR LAB USE ONLY						MA	TRIX		ax #	ESER	v.I	CAN	IPLING	_	111	-	1.5						1		1	
			₽.	П		1	T T	T	-	ESER	4	SAN	PLING	-1		7	-0									
Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	OIL	SLUDGE	ACID/BASE:	ICE/COOL V	uen.				Š	-	5									
11	BH-08	0.5			0	5 0	0	0) (	) A	0 0	1	DATE	-DTIME	-								_				
<i>i</i> a	BH-09	0.5	59	H		X	+	+	+	X	+	3/8/23	42.4	3	X	X	X									
13	BH-10	0.5	6	H	+	X		+	+	~	+	3/8/23	12.50	7	X	X	X	_								
14	BH-11	0.5	6	H	+	X		+	1	>	1	48/23	129		X	X	X	_								
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ASE NOTE: Liability and I lyses. All claims including	Damages. Cardinal's liability and client those for negligence and any other car	's exclusive remedy for any	claim	arising v	whethe	r based i	in contri	act or to	rt, shall t	e limited	to the	e amount paid	by the client for	or the	4	X	1									
rice. In no event shall Card	those for negligence and any other can final be liable for incidental or conseque out of or related to the performance of				MI STORY	HINGE BY	Seaming I	auto Leó	sived by	Cardinal y	within	1 30 days affer	completion of	the an	plicable											

Relinquished By:	Date: 3/10/13 Received By:	Verbal Result:
Relinquished By:	Time: [3:48	BJennings@ensolum.com
rtomiquisted by.	Pete: 123 Received By: Time: 1430 Received By:	REMARKS:
Delivered By: (Circle One)	Observed Temp. °C   Sample Condition U CHECKE	
Sampler - UPS - Bus - Other:	Corrected Temp. *CO. UC No No No	Rush Cool Intact Observed Temp. °C  Thermometer iD #113 Correction Factor -0.5°C No No Corrected Temp. °C

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Received by OCD:

Page 35 of 35



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Nam	oject Manager: Hadlie Green								IL	L TO	MARKET STREET					ΔΝΔΙ	VSIS	DEC	QUEST	-	
	Thadlise			P.O. #:				T		T		SITELL	1010	I KEG	UESI	_					
Address: 60	N. Marienfeld St. STE	400						Company:	12	TI	0.1	1									1 1
City: Midland		State: TX	Zip	o:	79701		- 1		15	TA b H	11	1	1								
Phone #: 43	25578895	Fax #:					_	Address: (d	o !	50.	411	1									
Project #:		Project Owne	r:					City: Mi	1	2.18	(65 )+	1									
Project Name:	Mesa B E	East-lives	1-	+	- 4-5	) :	100	State: Tw	7	in 7	3701	1		_							
Project Locatio	n: 32.06259	5-103 (	14	5	78	civ		Phone #: L	12	731	7770		1	1,0							
Sampler Name:		7	21	1	10			Fax #:	15	221	220	$1_{\times}$	1	- X							
FOR LAB USE ONLY				Г		MATRIX	_	PRESERV	/1	SAM	PLING	1/1	1+	1-5							
Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	SOIL	SLUDGE	ACID/BASE: ICE / COOL OTHER:		DATE	TIME	13.78	107	Chlo							
	BH-11a	4	4	1	U S	V	0) (	X			9:15	~		. /		$\dashv$	-	-	_	+-	
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33	BH-099	1.5	G	1		1		X			10:50	1	X	X		-	-	_	-		
24	BH-07a	1.5	6	Ĺ		2		X		10/23		~	~	~		+	$\dashv$	_	_	-	
210	13H-08a	2	G	[	1			X		10/23	11:45	X	X	5		$\top$					
34	BH-06a	1.5	9	1		(		X	100	10/23	12:00	X	X	X							
100	BH-IDa	2	9	1	5	4	4	X	3/1	6/23	9:45	X	X	×							
29	BH-08b	7	9	(	)	4	+	X	3/	10/23	12:30	X	X	X							
30	BH-06	0.5	4	#	1		-	X	3/1	8/23	10:50	X	X	X							
LEASE NOTE: Liability and	Damages. Cardinal's liability and clier those for negligence and any other of	nt's exclusive remedy for any	claim :	arising	whether bas	ed in cont	ract or to	rt, shall be limited to	3/9	8/23	12:20	K	X	5							
ervice. In no event shall Car	dinal be liable for incidental or consum	santal damages landed	26		o meese mad	e as wearing	and rece	erved by Cardinal w	ithin 30	0 days after	completion of the	applicable	2								
elinquished By:	out of or related to the performance of	Date:	THE REAL PROPERTY.	9010	ed By:	er such cli	iim is ba	sed upon any of the	above	e stated reas	ons or otherwise Verbal Res		☐ Yes		to 18	J-111 P1					
11/1/	111	3/10/2-3 Time:	1	2	100	N	5/	1.	,		All Results	are em	ailed.	Please	provide	dd'l Pho Email	one #: addres	s:			
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		S 15 23	Rec	erve	ed By:	15.0		1		0	REMARKS	:									
Delivered By: (Circ	cle One)	Time 1430	11	2	Sampl	e Cond	lition	CHECK	ED B	ov. 1		-									
ampler - UPS - B	us - Other: Com	recess Temp. °C	0 1	١		Intact	b.	Initia			Turnaround		F	Standa Rush	rd 🖹	Cod	ol Inta	act (		ondition d Temp.	°C
FURM-UUD R	3.2 10/07/21		716	91	□ N	s Z Y	No	/) \/			orrection Fa					H	Yes	Yes			



April 18, 2023

HADLIE GREEN
ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD, NM 88220

RE: MESA B WEST

Enclosed are the results of analyses for samples received by the laboratory on 04/12/23 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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> 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.

Celey D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/12/2023 Sampling Date: 04/10/2023
Reported: 04/18/2023 Sampling Type: Soil

Reported: 04/18/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact

Project Number: 03C2012021 (32.06221-103.61441) Sample Received By: Shalyn Rodriguez

Applyand By 14

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 01 2' (H231725-01)

DTEV 0021D

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	04/15/2023	ND	1.77	88.3	2.00	6.23	
Toluene*	<0.050	0.050	04/15/2023	ND	1.85	92.3	2.00	7.31	
Ethylbenzene*	<0.050	0.050	04/15/2023	ND	2.02	101	2.00	6.93	
Total Xylenes*	<0.150	0.150	04/15/2023	ND	6.23	104	6.00	6.43	
Total BTEX	<0.300	0.300	04/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	115	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/17/2023	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	04/14/2023	ND	171	85.3	200	2.39	
DRO >C10-C28*	<10.0	10.0	04/14/2023	ND	175	87.6	200	1.89	
EXT DRO >C28-C36	<10.0	10.0	04/14/2023	ND					
Surrogate: 1-Chlorooctane	79.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	83.8	% 49.1-14	8						

# Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/12/2023 Sampling Date: 04/10/2023

Reported: 04/18/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 (32.06221-103.61441) Sample Received By: Shalyn Rodriguez

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 02 2' (H231725-02)

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	04/15/2023	ND	1.77	88.3	2.00	6.23	
Toluene*	<0.050	0.050	04/15/2023	ND	1.85	92.3	2.00	7.31	
Ethylbenzene*	<0.050	0.050	04/15/2023	ND	2.02	101	2.00	6.93	
Total Xylenes*	<0.150	0.150	04/15/2023	ND	6.23	104	6.00	6.43	
Total BTEX	<0.300	0.300	04/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	115	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	04/17/2023	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	04/14/2023	ND	171	85.3	200	2.39	
DRO >C10-C28*	<10.0	10.0	04/14/2023	ND	175	87.6	200	1.89	
EXT DRO >C28-C36	<10.0	10.0	04/14/2023	ND					
Surrogate: 1-Chlorooctane	78.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	81.7	% 49.1-14	18						

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Celey D. Keine



# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/12/2023 Sampling Date: 04/10/2023

Reported: 04/18/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 (32.06221-103.61441) Sample Received By: Shalyn Rodriguez

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 03 2' (H231725-03)

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	04/15/2023	ND	1.77	88.3	2.00	6.23	
Toluene*	<0.050	0.050	04/15/2023	ND	1.85	92.3	2.00	7.31	
Ethylbenzene*	< 0.050	0.050	04/15/2023	ND	2.02	101	2.00	6.93	
Total Xylenes*	<0.150	0.150	04/15/2023	ND	6.23	104	6.00	6.43	
Total BTEX	<0.300	0.300	04/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	119	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/17/2023	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	04/14/2023	ND	171	85.3	200	2.39	
DRO >C10-C28*	<10.0	10.0	04/14/2023	ND	175	87.6	200	1.89	
EXT DRO >C28-C36	<10.0	10.0	04/14/2023	ND					
Surrogate: 1-Chlorooctane	80.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.0	% 49.1-14	8						

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Celey D. Keine



# Analytical Results For:

**ENSOLUM** HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/12/2023 Sampling Date: 04/10/2023

Reported: 04/18/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact 03C2012021 (32.06221-103.61441) Sample Received By: Project Number: Shalyn Rodriguez

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 04 2' (H231725-04)

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	04/15/2023	ND	1.77	88.3	2.00	6.23	
Toluene*	<0.050	0.050	04/15/2023	ND	1.85	92.3	2.00	7.31	
Ethylbenzene*	<0.050	0.050	04/15/2023	ND	2.02	101	2.00	6.93	
Total Xylenes*	<0.150	0.150	04/15/2023	ND	6.23	104	6.00	6.43	
Total BTEX	<0.300	0.300	04/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	117 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/17/2023	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	04/15/2023	ND	171	85.3	200	2.39	
DRO >C10-C28*	<10.0	10.0	04/15/2023	ND	175	87.6	200	1.89	
EXT DRO >C28-C36	<10.0	10.0	04/15/2023	ND					
Surrogate: 1-Chlorooctane	79.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	82.9	% 49.1-14	8						

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Celey D. Keene



# Analytical Results For:

**ENSOLUM** HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/12/2023 Sampling Date: 04/10/2023

Reported: 04/18/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact 03C2012021 (32.06221-103.61441) Project Number: Sample Received By: Shalyn Rodriguez

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 05 2' (H231725-05)

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	04/15/2023	ND	1.77	88.3	2.00	6.23	
Toluene*	<0.050	0.050	04/15/2023	ND	1.85	92.3	2.00	7.31	
Ethylbenzene*	<0.050	0.050	04/15/2023	ND	2.02	101	2.00	6.93	
Total Xylenes*	<0.150	0.150	04/15/2023	ND	6.23	104	6.00	6.43	
Total BTEX	<0.300	0.300	04/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	120 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/17/2023	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	04/15/2023	ND	171	85.3	200	2.39	
DRO >C10-C28*	<10.0	10.0	04/15/2023	ND	175	87.6	200	1.89	
EXT DRO >C28-C36	<10.0	10.0	04/15/2023	ND					
Surrogate: 1-Chlorooctane	75.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	79.7	% 49.1-14	8						

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# **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

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Received by OCD: 7/19/2023 3:05:16 PM

Page 8 of



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Project Manager: Hadlie Green P.O. #:	
Project Manager: Hadlie Green P.O. #:	
Address: 601 N Marienfeld Street, Suite 400 Company: BTA Oil	
City: Midland State: TX Zip: 79701 Attn: Bob Hall	
Phone #: 432-557-8895	
Project #: 03C2012021 Project Owner: City: Midland	
Project Name: Mesa B West State: TX Zip: 79701	
Project Location: 32.06221,-103.61441 Phone #: 432-312-2203	
Sampler Name: Peter Van Patten Fax #:	
FOR LAB USE ONLY  MATRIX  PRESERV. SAMPLING  O	
Tab I.D. Sample I.D. Depth (geet)  Soll School Soll Soll Soll Soll Soll Soll Soll	
(FSO) 2 2 2 1 V 4-10-24 1050 X X X	
2 FSOZ 2' C 1 V V 4-10-23 1055 X X X	
3 FG 03 2' C 1 / 4-1023 1030 Y X X	
4 FS04 6 2' C 1 V 41027 1120 x x X	
5 FG05 012' CI V W10-27 1325 x X X	

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affiliates or successors arising out of or related to the perform	ance of services hereunder by Ca	erdinal, regardless of whether such claim is base	d upon any of the above stated re	asons or otherwise.	15-695	Control Control	
Relinquished By:	Date:	Received By:		Verbal Result:   Yes		Add'l Phone #:	
0 11-1	4112123	CO -110°		All Results are emailed			
Teto Un Total	Time; 415	Modera	nuly	harren een	solum.	com	
Relinguished By:	Date:	Received By:		REMARKS:			
	Time:					/	
Delivered By: (Circle One)	Observed Temp. °C	Sample Condition	CHECKED BY:	Turnaround Time:	Standard	Bacteria (only)	Sample Condition
	· ·		(Initials)		Rush	Cool Intact	Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. "C	2.10: Yes Yes	XX	Thermometer ID #113		Yes Yes	C1-1 T °C
A	0	No No	0	Correction Factor -0.5°C		Nc No	Corrected Temp. °C

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

FURIN-006 R 3.2 TU/07/2



April 21, 2023

HADLIE GREEN
ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD, NM 88220

RE: MESA B WEST

Enclosed are the results of analyses for samples received by the laboratory on 04/18/23 12:24.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> 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.

Celey D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

 Received:
 04/18/2023
 Sampling Date:
 04/17/2023

 Reported:
 04/21/2023
 Sampling Type:
 Soil

Reported: 04/21/2023 Sampling Type: Soil
Project Name: MESA B WEST Sampling Condition: Cool & Intact

Project Number: 03C2012021 (32.06221-103.61441) Sample Received By: Tamara Oldaker

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 06 1' (H231856-01)

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	04/20/2023	ND	1.74	87.2	2.00	4.25	
Toluene*	<0.050	0.050	04/20/2023	ND	1.84	92.1	2.00	2.10	
Ethylbenzene*	<0.050	0.050	04/20/2023	ND	1.88	94.2	2.00	1.99	
Total Xylenes*	<0.150	0.150	04/20/2023	ND	5.74	95.7	6.00	1.31	
Total BTEX	<0.300	0.300	04/20/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	105	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	04/20/2023	ND	416	104	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	04/20/2023	ND	166	82.8	200	0.285	
DRO >C10-C28*	<10.0	10.0	04/20/2023	ND	160	80.1	200	1.65	
EXT DRO >C28-C36	<10.0	10.0	04/20/2023	ND					
Surrogate: 1-Chlorooctane	95.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	93.2	% 49.1-14	8						

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# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/18/2023 Sampling Date: 04/17/2023

Reported: 04/21/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 (32.06221-103.61441) Sample Received By: Tamara Oldaker

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 07 1' (H231856-02)

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	04/20/2023	ND	1.74	87.2	2.00	4.25	
Toluene*	<0.050	0.050	04/20/2023	ND	1.84	92.1	2.00	2.10	
Ethylbenzene*	<0.050	0.050	04/20/2023	ND	1.88	94.2	2.00	1.99	
Total Xylenes*	<0.150	0.150	04/20/2023	ND	5.74	95.7	6.00	1.31	
Total BTEX	<0.300	0.300	04/20/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	04/20/2023	ND	416	104	400	3.77	
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	04/20/2023	ND	166	82.8	200	0.285	
DRO >C10-C28*	<10.0	10.0	04/20/2023	ND	160	80.1	200	1.65	
EXT DRO >C28-C36	<10.0	10.0	04/20/2023	ND					
Surrogate: 1-Chlorooctane	86.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	83.7	% 49.1-14	8						

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# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/18/2023 Sampling Date: 04/17/2023

Reported: 04/21/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 (32.06221-103.61441) Sample Received By: Tamara Oldaker

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 08 1' (H231856-03)

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	04/20/2023	ND	1.74	87.2	2.00	4.25	
Toluene*	<0.050	0.050	04/20/2023	ND	1.84	92.1	2.00	2.10	
Ethylbenzene*	<0.050	0.050	04/20/2023	ND	1.88	94.2	2.00	1.99	
Total Xylenes*	<0.150	0.150	04/20/2023	ND	5.74	95.7	6.00	1.31	
Total BTEX	<0.300	0.300	04/20/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	04/20/2023	ND	416	104	400	3.77	
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	04/20/2023	ND	166	82.8	200	0.285	
DRO >C10-C28*	<10.0	10.0	04/20/2023	ND	160	80.1	200	1.65	
EXT DRO >C28-C36	<10.0	10.0	04/20/2023	ND					
Surrogate: 1-Chlorooctane	91.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.1	% 49.1-14	8						

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# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/18/2023 Sampling Date: 04/17/2023

Reported: 04/21/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 (32.06221-103.61441) Sample Received By: Tamara Oldaker

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 09 1' (H231856-04)

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	04/20/2023	ND	1.74	87.2	2.00	4.25	
Toluene*	<0.050	0.050	04/20/2023	ND	1.84	92.1	2.00	2.10	
Ethylbenzene*	< 0.050	0.050	04/20/2023	ND	1.88	94.2	2.00	1.99	
Total Xylenes*	<0.150	0.150	04/20/2023	ND	5.74	95.7	6.00	1.31	
Total BTEX	<0.300	0.300	04/20/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	04/20/2023	ND	416	104	400	3.77	
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	04/20/2023	ND	166	82.8	200	0.285	
DRO >C10-C28*	<10.0	10.0	04/20/2023	ND	160	80.1	200	1.65	
EXT DRO >C28-C36	<10.0	10.0	04/20/2023	ND					
Surrogate: 1-Chlorooctane	87.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	85.6	% 49.1-14	8						

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# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/18/2023 Sampling Date: 04/17/2023

Reported: 04/21/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 (32.06221-103.61441) Sample Received By: Tamara Oldaker

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 10 1' (H231856-05)

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	04/20/2023	ND	1.74	87.2	2.00	4.25	
Toluene*	<0.050	0.050	04/20/2023	ND	1.84	92.1	2.00	2.10	
Ethylbenzene*	<0.050	0.050	04/20/2023	ND	1.88	94.2	2.00	1.99	
Total Xylenes*	<0.150	0.150	04/20/2023	ND	5.74	95.7	6.00	1.31	
Total BTEX	<0.300	0.300	04/20/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/20/2023	ND	416	104	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	04/20/2023	ND	166	82.8	200	0.285	
DRO >C10-C28*	<10.0	10.0	04/20/2023	ND	160	80.1	200	1.65	
EXT DRO >C28-C36	<10.0	10.0	04/20/2023	ND					
Surrogate: 1-Chlorooctane	99.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	101	% 49.1-14	8						

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Celey D. Keine



# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/18/2023 Sampling Date: 04/17/2023

Reported: 04/21/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 (32.06221-103.61441) Sample Received By: Tamara Oldaker

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 11 1' (H231856-06)

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	04/20/2023	ND	1.81	90.3	2.00	0.345	
Toluene*	<0.050	0.050	04/20/2023	ND	1.87	93.7	2.00	0.577	
Ethylbenzene*	<0.050	0.050	04/20/2023	ND	2.05	102	2.00	1.85	
Total Xylenes*	<0.150	0.150	04/20/2023	ND	6.27	104	6.00	2.41	
Total BTEX	<0.300	0.300	04/20/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	113	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	04/20/2023	ND	416	104	400	3.77	
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	04/20/2023	ND	166	82.8	200	0.285	
DRO >C10-C28*	<10.0	10.0	04/20/2023	ND	160	80.1	200	1.65	
EXT DRO >C28-C36	<10.0	10.0	04/20/2023	ND					
Surrogate: 1-Chlorooctane	106	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	107	% 49.1-14	18						

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Celey D. Keine



# **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

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Celey D. Keine

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

000 000C EAY (575) 393-2476	101 East Marland	i, Hobbs, NM 88240
(575) 393-2326 FAX (575) 666 E	(575) 393-2326	FAX (575) 393-2476
: Ensolum, LLC	Ensolum, LLC	

	(575) 393-2326 FA	X (575) 393-247	6		_	100		RII	L TO	ing the				ANA	LYSIS	REQU	ESI		$\neg$
Company Name: E	Ensolum, LLC					P	0. #:	DIL											
Project Manager:	Hadle Greek	1						ny: [	RTA										
Address: 317.2	2 National Parl	is Hwy				- 10	ompa	(2.)	Hall						1 1				
city: Carlsb	ad	State: NM	Zip: 8	822	0_	- IA	ttn:	POD	4 South f	2105					1 1				
Phone # 427	-557-8895	Fax #:	0+1			- A	ddres	8 10	land	(6)									
Project #: 030	701761	Project Owner:	BTA			C	ity:	INLIG	zi. 707	51		- 1							
Project Name:	Mesa Bwest					S	tate:	X	Zip: 797	7703		- 1							
Project Name.	: 32.06221,-	103.61441							32-312-	CLOS									- 1
Sampler Name:	Connor Whit	tman				_	ax#:	ESERV	SAMP	LING									- 1
FOR LAB USE ONLY			.	-	MATR							- 1						1 1	- 1
Lab I.D. HZ31856	Sample I.D.	Depth (feet)	- (G) (G)RAB OR (C)OMP	GROUNDWATER	X soll	SLUDGE	OTHER: ACID/BASE:	ICE / COOL	DATE 4/17/23	71ME 205 215	- X BTEX	Hdl ×-	× + C						
2 3 4 5 6	F509 F510	<b>1</b>			J					1245	I I	V	4						
						in contract	or tort, si	halt be limi	ted to the amount p	aid by the client	for the	shie							

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 the client for the 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 incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,

analyses. All claims: including those to be service. In no event shall Cardinal be liable for incidental affiliates or successors arising out of or related to the performance.	or consequental damages, including without immasses, sustained in the consequental damages, including without immasses, or whether such claim is based upon an formance of services hereunder by Cardinal, regardless of whether such claim is based upon an analysis of services. A service of services are supported by:	y of the above stated response of universal Results: Yes No Add'l Phone #:  Verbal Results are emailed. Please provide Email address:  All Results are emailed.
Relinquished By:	4/1/103	Proper Vent I stant & F.CC
11/1/	Time: SIO WHM	REMARKS:
Relinquished By:	Date: Received By:	
Pumu	Time: 334 Allularia Oscarion Ch	HECKED BY: Turnaround Time: Standard  Bacteria (only) Sample Condition Rush  Cool Intact Observed Temp. °C
Delivered By: (Circle One)	Cool Intact	(Initials) Thermometer ID #113 Ver Ves Yes No No Corrected Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C 4,4 No No	Y shanges to celev keene@cardinallabsnm.com

6

Page 9 of



April 25, 2023

HADLIE GREEN
ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD, NM 88220

RE: MESA B WEST

Enclosed are the results of analyses for samples received by the laboratory on 04/19/23 13:40.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> 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.

Celey D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/19/2023 Sampling Date: 04/18/2023

Reported: 04/25/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 (32.06221-103.61441) Sample Received By: Shalyn Rodriguez

Applyand By 1H /

Project Location: BTA - LEA COUNTY, NM

# Sample ID: FS 12 2' (H231886-01)

DTEV 0021D

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	04/22/2023	ND	1.87	93.5	2.00	14.7	
Toluene*	<0.050	0.050	04/22/2023	ND	2.00	99.8	2.00	15.7	
Ethylbenzene*	<0.050	0.050	04/22/2023	ND	2.06	103	2.00	15.5	
Total Xylenes*	<0.150	0.150	04/22/2023	ND	6.22	104	6.00	16.2	
Total BTEX	<0.300	0.300	04/22/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 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	224	16.0	04/21/2023	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	04/22/2023	ND	174	86.9	200	2.17	
DRO >C10-C28*	<10.0	10.0	04/22/2023	ND	176	87.8	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	04/22/2023	ND					
Surrogate: 1-Chlorooctane	81.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.6	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



# Analytical Results For:

ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/19/2023 Sampling Date: 04/18/2023

Reported: 04/25/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 (32.06221-103.61441) Sample Received By: Shalyn Rodriguez

Applyzed By: 1H /

Project Location: BTA - LEA COUNTY, NM

ma/ka

# Sample ID: FS 13 3' (H231886-02)

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	a By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2023	ND	1.87	93.5	2.00	14.7	
Toluene*	<0.050	0.050	04/22/2023	ND	2.00	99.8	2.00	15.7	
Ethylbenzene*	<0.050	0.050	04/22/2023	ND	2.06	103	2.00	15.5	
Total Xylenes*	<0.150	0.150	04/22/2023	ND	6.22	104	6.00	16.2	
Total BTEX	<0.300	0.300	04/22/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	04/21/2023	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	04/22/2023	ND	174	86.9	200	2.17	
DRO >C10-C28*	<10.0	10.0	04/22/2023	ND	176	87.8	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	04/22/2023	ND					
Surrogate: 1-Chlorooctane	86.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	92.4	% 49.1-14	8						

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Celey D. Keene



# Analytical Results For:

**ENSOLUM** HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 04/19/2023 Sampling Date: 04/18/2023

Reported: 04/25/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact 03C2012021 (32.06221-103.61441) Sample Received By: Project Number: Shalyn Rodriguez

Project Location: BTA - LEA COUNTY, NM

#### Sample ID: SW 01 0-2' (H231886-03)

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	04/22/2023	ND	1.87	93.5	2.00	14.7	
Toluene*	<0.050	0.050	04/22/2023	ND	2.00	99.8	2.00	15.7	
Ethylbenzene*	<0.050	0.050	04/22/2023	ND	2.06	103	2.00	15.5	
Total Xylenes*	<0.150	0.150	04/22/2023	ND	6.22	104	6.00	16.2	
Total BTEX	<0.300	0.300	04/22/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 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	288	16.0	04/21/2023	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	04/22/2023	ND	174	86.9	200	2.17	
DRO >C10-C28*	<10.0	10.0	04/22/2023	ND	176	87.8	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	04/22/2023	ND					
Surrogate: 1-Chlorooctane	80.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.0	% 49.1-14	8						

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Celey D. Keene

QR-04



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

# **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.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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

\*\*\* Insufficient time to reach temperature.

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

The RPD for the BS/BSD was outside of historical limits.

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

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Celeg D. Freene

Received by OCD: 7/19/2023 3:05:16 PM

Page 6 of 6

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 8824 (575) 393-2326 FAX (575) 393-247	6	BILL TO	ANALYSIS REQUEST
pany Name: Ensolum, LLC		P.O. #:	
ect Manager: Hadlie Green		Company: BTA Oil	
601 N. Marienfeld St. STE 400		Rob Holl	
State: 1X	Zip: 79701	Address: 104 SPLOS ST	
#. 43255780 95 Fax#:		- 1 - diand	
Project Owner.		01 Jain 79 TO	
		Phone #: 4 32 3122 203	
mpler Name: Om; try a.kana	NOL	Fax #: PRESERV. SAMPLING	3   1   1   1   1
R LAB USE ONLY			
	# CONTAINERS # CONTAINERS GROUNDWATER WASTEWATER SOIL.		工0
Sample Depth	(G)RAB OR (C)O # CONTAINERS GROUNDWATE WASTEWATER SOIL	iii d	
_ab l.D. Sample l.D. Sample Depth (feet)	B OF TTAIL	SLUDGE OTHER: OTHER:  TACID/BASE: OTHER:  SMILL  SM	(-15)
	CON CON VAST	DATE TIME	
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LEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive reimody for nailyses. All claims including those for negligence and any other cause whatsoever shall service. In no event shall Cardinal be liable for incidental or consequental damages, include efficience or successors arising out of or related to the performance of services hereunder to Date:	ding without limitation, business interruptly Cardinal, regardless of whether such	b claim is based upon any of the above stated reasons or otherwise.  Verbal Result:	e emailed. Please provide Email address:  Densolum.com. The NG Nelu Columbia m. con
fillutes of successors are any Date:	Mecciron -	All Results are	remailed. Please provide higher oversoum, com
Relinquished By:  ON VIOLE Time: 1340	o Svance		( )
Date:	Received By:	REMARKS:	
Relinquished By:			Standard Bacteria (only) Sample Condition
Time:	°C Sample C	ondition CHECKED BY: Turnaround T	ime: Startdard Cool Intact Observed remp. O
Delivered By: (Circle One) Observed Temp.	°C (0, 8: Cool In	- 1-1 1-1	Vos Ves



May 08, 2023

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: MESA B WEST

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 <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

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.

Celey D. Keene

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



05/01/2023

Soil

# Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023

Reported: 05/08/2023 Sampling Type:
Project Name: MESA B WEST Sampling Condition:

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 Sample Received By: Shalyn Rodriguez

Sampling Date:

Project Location: BTA 32.06221,-103.61441

# Sample ID: FS 15 1.0' (H232183-01)

BTEX 8021B	mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/05/2023	ND	1.97	98.3	2.00	1.67	
Toluene*	<0.050	0.050	05/05/2023	ND	1.99	99.4	2.00	2.84	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	1.96	97.9	2.00	1.81	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	5.96	99.3	6.00	1.40	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	05/04/2023	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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	101	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	114 9	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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Celey & Keene



# Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 Sample Received By: Shalyn Rodriguez

Project Location: BTA 32.06221,-103.61441

# Sample ID: FS 16 1.0' (H232183-02)

BTEX 8021B	mg/kg		Analyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/05/2023	ND	1.97	98.3	2.00	1.67	
Toluene*	<0.050	0.050	05/05/2023	ND	1.99	99.4	2.00	2.84	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	1.96	97.9	2.00	1.81	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	5.96	99.3	6.00	1.40	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	05/04/2023	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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	57.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	63.5	% 49.1-14	8						

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Celey D. Keine



# Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 Sample Received By: Shalyn Rodriguez

Analyzed By: JH

Project Location: BTA 32.06221,-103.61441

mg/kg

# Sample ID: FS 17 1.0' (H232183-03)

BTEX 8021B

DILX OUZID	mg/ kg		Andryzo	Analyzea by. 311					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/05/2023	ND	1.97	98.3	2.00	1.67	
Toluene*	<0.050	0.050	05/05/2023	ND	1.99	99.4	2.00	2.84	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	1.96	97.9	2.00	1.81	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	5.96	99.3	6.00	1.40	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 % 71.5-13		4						
Chloride, SM4500CI-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	05/04/2023	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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	93.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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# Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact Sample Received By: Shalyn Rodriguez Project Number: 03C2012021

Project Location: BTA 32.06221,-103.61441

# Sample ID: FS 18 1.0' (H232183-04)

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	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	QR-03
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	05/04/2023	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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	85.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	96.2	% 49.1-14	8						

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# Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023
Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 Sample Received By: Shalyn Rodriguez

Project Location: BTA 32.06221,-103.61441

# Sample ID: FS 19 1.0' (H232183-05)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	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	224	16.0	05/04/2023	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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	82.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	92.3	% 49.1-14	8						

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Celey & Keene



# Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil Project Name: MESA B WEST Sampling Condition: Cool & Intact

Sample Received By: Project Number: 03C2012021 Shalyn Rodriguez

Project Location: BTA 32.06221,-103.61441

# Sample ID: FS 20 1.0' (H232183-06)

BTEX 8021B	mg/kg		Analyze	Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500CI-B	mg	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	05/04/2023	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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	88.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.4	% 49.1-14	8						

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# Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 Sample Received By: Shalyn Rodriguez

Analyzed By: 1H /

Project Location: BTA 32.06221,-103.61441

# Sample ID: FS 21 1.0' (H232183-07)

RTFY 8021R

BIEX 8021B	mg/kg		Anaiyze	Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 % 71.5-13		4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	05/04/2023	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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	93.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	110	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Reported: 05/08/2023

05/08/2023 MESA B WEST

03C2012021

Project Location: BTA 32.06221,-103.61441

Sampling Date: 05/01/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

#### Sample ID: FS 22 1.0' (H232183-08)

Project Name:

Project Number:

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	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 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	32.0	16.0	05/04/2023	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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	90.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	107	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 Sample Received By: Shalyn Rodriguez

Analyzed By: JH/

Project Location: BTA 32.06221,-103.61441

mg/kg

#### Sample ID: FS 23 1.0' (H232183-09)

BTEX 8021B

	9,	9	7	7: 5::.,					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/04/2023	ND	432	108	400	0.00	
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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	95.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	109	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact Sample Received By: Project Number: 03C2012021 Shalyn Rodriguez

Project Location: BTA 32.06221,-103.61441

#### Sample ID: FS 24 1.0' (H232183-10)

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	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	05/04/2023	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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	86.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	98.9	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact Sample Received By: Project Number: 03C2012021 Shalyn Rodriguez

Project Location: BTA 32.06221,-103.61441

#### Sample ID: FS 25 1.0' (H232183-11)

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	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 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	80.0	16.0	05/04/2023	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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	88.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.0	% 49.1-14	8						

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Celey D. Keine



#### Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 Sample Received By: Shalyn Rodriguez

Project Location: BTA 32.06221,-103.61441

#### Sample ID: FS 26 1.0' (H232183-12)

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	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/04/2023	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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	96.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	107	% 49.1-14	8						

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Celey D. Keene



#### Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 Sample Received By: Shalyn Rodriguez

Analyzed By: JH/

Project Location: BTA 32.06221,-103.61441

mg/kg

#### Sample ID: FS 27 1.0' (H232183-13)

BTEX 8021B

DILX OUZID	ıııg,	ng .	Alldiyzo	.u Dy. 3117					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/04/2023	ND	432	108	400	0.00	
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	05/04/2023	ND	162	80.8	200	1.94	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	156	78.1	200	2.43	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	77.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.2	% 49.1-14	8						

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Celey D. Keene



#### Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact
Project Number: 03C2012021 Sample Received By: Shalyn Rodriguez

Analyzed By: JH/

Project Location: BTA 32.06221,-103.61441

mg/kg

#### Sample ID: FS 28 1.0' (H232183-14)

BTEX 8021B

	9,	9	7	7: 5::.,					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	05/04/2023	ND	432	108	400	0.00	
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	05/04/2023	ND	192	96.1	200	19.5	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	192	96.0	200	18.4	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	92.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.9	% 49.1-14	8						

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Celey D. Keine



#### Analytical Results For:

ENSOLUM, LLC HADLIE GREEN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 05/03/2023 Sampling Date: 05/01/2023

Reported: 05/08/2023 Sampling Type: Soil

Project Name: MESA B WEST Sampling Condition: Cool & Intact Sample Received By: Project Number: 03C2012021 Shalyn Rodriguez

Project Location: BTA 32.06221,-103.61441

#### Sample ID: FS 29 1.0' (H232183-15)

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	05/05/2023	ND	2.05	103	2.00	2.88	
Toluene*	<0.050	0.050	05/05/2023	ND	2.16	108	2.00	3.86	
Ethylbenzene*	<0.050	0.050	05/05/2023	ND	2.10	105	2.00	2.27	
Total Xylenes*	<0.150	0.150	05/05/2023	ND	6.49	108	6.00	1.85	
Total BTEX	<0.300	0.300	05/05/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	05/04/2023	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	05/04/2023	ND	192	96.1	200	19.5	
DRO >C10-C28*	<10.0	10.0	05/04/2023	ND	192	96.0	200	18.4	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					
Surrogate: 1-Chlorooctane	69.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	74.8	% 49.1-14	8						

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Celey D. Keene



#### **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.
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

QR-04

\*\* 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  $6^{\circ}\text{C}$ 

The RPD for the BS/BSD was outside of historical limits.

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

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Celeg D. Freene

Page 18 of 19

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Ensolum, LLC	AX (070) 000 2						П			E	3//	L TO						ANAL	LYSI	S R	EQU	EST	_	
Project Manager								T	P.O	). #:				-											
		140 400						7	Co	mpa	any:	B	TA Oil S	Producers											
	Marienfeld Street, Su		7in	707	01								in Sira		1									1	1 1
City: Midland		State: TX	Zip	: 797	01			_					S. Peros	1	1 1										1 1
Phone #: 432-55	7-8895	Fax #:			_		_	_	-		-	_	nd	110											1 1
Project #: 03C20	12021	Project Owne	er:			_	_	$\dashv$	City	y:	1)	CIN.	Zip: 797(	01						1		1		1	
Project Name: N	Mesa B West							-	Sta	te:	1 '	17	Zip: (1/(	2752											1 1
Project Location	n: 32.06221,-103.6144	1							100			15	2-682-	1177											
Sampler Name:	Peter Van Patten		_	_			TD//	_	Fax	_	SEF	Ive	SAMP	ING	١. ا										
FOR LAB USE ONLY	14.		0.		Т	MA	TRIX		Н	PRE	OEF	7	SAMI	LIITO	es										
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	NASTEWATER	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Chlorida	BTEX	TIAT								
riduonia	FS15	1.0'	C	1		1					V		9-1-23	1015	V	1	V			_	-	$\perp$	+	+	1
2	FS16	1.0'	C	1		1					V		5-1-23	-	1	V	1		_	-	+	-	+	-	+-+
3	FS17	1.0'	C	1		1					1		9-1-23	1000	V	V	V	_	_	-	+	+	+	+	+
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5	FS19	1,0'	6	1			-				1		5-1-23	-	1	V	1	-	-	+	+	+	+	+	+
ie	FS20	1.01	C	1		1					V		5-1-23		V	V	1	-	-	+	+	+	+	+	+ +
7	FSZI	1.0'	C	1		_	1	-		L	V		5-1-23		V	1	1	-	-	+	+	+	+	+	+ +
8	FSZZ	1.0'	C	1		1	4	-	_	L	V		5-1-23		V	1	1	-	+	+	+	+	+	+	+ +
9	FS23	1.01	C	1			1	-		L	V		5-1-23		1	1	V	-	-	-	+	+	+	+	
10	FS24	(.0'	C	1			/				V		5-1-23		170	1	1	_	_	_			_	_	

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efficience or successors arising out of or related to the per Relinquished By:  Tet Un Tett- Relinquished By:	7-3-23 Time:	Received By:  Spool 200  Received By:	mers	Verbal Result: Il Results are en Ingreen en REMARKS:	□ Yes nailed. Pl nsdum	nace prov	ide En	Phone #: nail address: morrissey Censelum. com	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Time:  Observed Temp. °C	Cool Intact	(Initials)	urnaround Time	F113	andard ush	No.	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C  Yes Yes No No Corrected Temp. °C	

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

Received by OCD: 7/19/2023 3:05:16 PM

Received by OCD: 7/19/2023 3:05:16 PM

19

Page 19 of

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	(575) 393-2326 F	AA (5/5) 383-2	410			_	_	П			B	IL	L TO					-	ANAI	YSI	RE	QUE	ST		
Project Manager								1	P.C	). #:															
		ito 400		_				$\dashv$	Co	mpa	any:	B	T/4 0:1	Produces											
	Marienfeld Street, Su		7:-	. 70	704			-	-				n Sirg		1										
City: Midland		State: TX	Zip	: 79	01			-	_				S. 78:05	/	1										
Phone #: 432-55	7-8895	Fax #:			_						lidle			20	1										
Project #: 03C20	12021	Project Owner	er:											201											
Project Name: N	Mesa B West				_			_	Sta	te:	17	7	Zip: 797	2763											
	n: 32.06221,-103.6144	1										20	2-682-	717)	1										
	Peter Van Patten			_	_			_		(#:			CARE	LING	1								1		
FOR LAB USE ONLY						M	ATRI	X		PRE	SER	<b>Y</b>	SAMP	LING	1						1	1			
Lab I.D.	Sample I.D.		(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Chlorides	BTEX	HALL								
	FSZ5	1.0'	C	1			1				1	1	5-1-23		1	V	V		-	-	-	+	+	+-	$\vdash$
13	F526	1.0'	(	1			1				V		5-1-23		1	~	~		-	-	-	+	+	$\vdash$	$\vdash$
13	FST7	1.0'	C	1			1				V		5-1-23		V		V	-	-	-	-	+	+	+-	+
14	FSZ8	1.0'	C	1			V			L	V		5-1-23		V	V	1		-	+-	+	+	+-	+	$\vdash$
15	F529	1.0'	C	1			4			L	V	4	5-1-23	1415	V	V	V	-	-	$\vdash$	+	+-	+	+	$\vdash$
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Relinguished By:	Date: 9-3-23 Time: 12/5	Received By:  SPOCINO	mey	Verbal Result: Yes No Add'l Phone #:  All Results are emailed. Please provide Email address:  Ingranden solum, com, two rissey & ensolum. com						
Relinquished By:	Date:	Received By:	. 0	REMARKS:		Condition				
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C	.4C Cool Intact	(Initials)	Turnaround Time: Thermometer ID #113 Correction Factor -0.5°C	Standard Rush	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C Yes Yes No No Corrected Temp. °C				



May 31, 2023

HADLIE GREEN

**ENSOLUM** 

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA B WEST

Enclosed are the results of analyses for samples received by the laboratory on 05/03/23 13:30.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

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

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

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

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

Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Celey D. Keene

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

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Reported:

31-May-23 12:01



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

### Analytical Results For:

**ENSOLUM** 3122 NATIONAL PARKS HWY

CARLSBAD NM, 88220

Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Project Manager: HADLIE GREEN

Fax To:

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW 02 0'-3'	H232187-01	Soil	03-May-23 09:55	03-May-23 13:30
FS 30 1.5'	H232187-02	Soil	03-May-23 09:25	03-May-23 13:30
FS 31 1.5'	H232187-03	Soil	03-May-23 09:30	03-May-23 13:30
FS 32 1.5'	H232187-04	Soil	03-May-23 09:35	03-May-23 13:30
FS 33 1.5'	H232187-05	Soil	03-May-23 09:40	03-May-23 13:30
FS 34 1.5'	H232187-06	Soil	03-May-23 09:45	03-May-23 13:30
FS 35 1.5'	H232187-07	Soil	03-May-23 09:50	03-May-23 13:30
FS 36 1.0'	H232187-08	Soil	03-May-23 10:30	03-May-23 13:30
FS 37 1.0'	H232187-09	Soil	03-May-23 10:35	03-May-23 13:30
FS 38 1.0'	H232187-10	Soil	03-May-23 10:40	03-May-23 13:30
FS 39 1.0'	H232187-11	Soil	03-May-23 10:45	03-May-23 13:30
FS 40 1.0'	H232187-12	Soil	03-May-23 10:50	03-May-23 13:30
FS 41 1.0'	H232187-13	Soil	03-May-23 10:55	03-May-23 13:30
FS 42 1.0'	H232187-14	Soil	03-May-23 11:00	03-May-23 13:30
FS 43 1.0'	H232187-15	Soil	03-May-23 11:05	03-May-23 13:30
FS 44 1.0'	H232187-16	Soil	03-May-23 11:10	03-May-23 13:30
FS 14 1.0'	H232187-17	Soil	03-May-23 11:15	03-May-23 13:30

05/31/23 - Client changed the sample ID on -17 (see COC). This is the revised report and will replace the one sent on 05/08/23.

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### Analytical Results For:

**ENSOLUM** 3122 NATIONAL PARKS HWY

CARLSBAD NM, 88220

Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# SW 02 0'-3' H232187-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardin	al Laborat	ories					
Inorganic Compounds										
Chloride	112		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compound	s 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	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050335	ЈН	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050335	ЈН	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050335	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (P.	ID)		108 %	71.5	-134	3050335	ЈН	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			91.4 %	48.2	-134	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			97.0 %	49.1	-148	3050331	MS	04-May-23	8015B	

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### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Reported: 31-May-23 12:01

Project Number: 03C2012021 (32.06221-103.61441 Project Manager: HADLIE GREEN

Fax To:

FS 30 1.5' H232187-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	368		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	ЈН	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			113 %	71.5	-134	3050419	ЈН	05-May-23	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			86.2 %	48.2	-134	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			90.7 %	49.1	-148	3050331	MS	04-May-23	8015B	

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### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 31 1.5' H232187-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compound	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (Pl	ID)		107 %	71.5	-134	3050419	ЈН	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			93.0 %	48.2	-134	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			99.8 %	49.1	-148	3050331	MS	04-May-23	8015B	

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 32 1.5' H232187-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardin	al Laborat	tories					
Inorganic Compounds										
Chloride	64.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)	)		107 %	71.5	-134	3050419	ЈН	05-May-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			86.1 %	48.2	-134	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			92.3 %	49.1	-148	3050331	MS	04-May-23	8015B	

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### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 33 1.5' H232187-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	48.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PIL	))		108 %	71.5	-134	3050419	JH	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			93.9 %	48.2	-134	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			103 %	49.1	-148	3050331	MS	04-May-23	8015B	

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### Analytical Results For:

**ENSOLUM** 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Project: MESA B WEST

Reported:

Project Number: 03C2012021 (32.06221-103.61441

31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 34 1.5' H232187-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Laborat	tories					
Inorganic Compounds										
Chloride	80.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds h	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JН	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JН	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			112 %	71.5	-134	3050419	JH	05-May-23	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			87.3 %	48.2	-134	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			94.4 %	49.1	-148	3050331	MS	04-May-23	8015B	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 35 1.5' H232187-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	tories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PI	D)		109 %	71.5	-134	3050419	JH	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			94.3 %	48.2	-134	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			101 %	49.1	-148	3050331	MS	04-May-23	8015B	

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### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 36 1.0' H232187-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Laborat	tories					
Inorganic Compounds										
Chloride	48.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compound	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (P.	ID)		117 %	71.5	-134	3050419	JH	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			82.7 %	48.2	-134	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			91.9 %	49.1	-148	3050331	MS	04-May-23	8015B	

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## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 37 1.0' H232187-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	tories					
Inorganic Compounds										
Chloride	48.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JН	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JН	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID	))		105 %	71.5	-134	3050419	JH	05-May-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			84.9 %	48.2	-134	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			92.3 %	49.1	-148	3050331	MS	04-May-23	8015B	

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### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 38 1.0' H232187-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	tories					
Inorganic Compounds										
Chloride	48.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PIL	))		108 %	71.5	-134	3050419	JH	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			89.6 %	48.2	-134	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			97.7 %	49.1	-148	3050331	MS	04-May-23	8015B	

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### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 39 1.0' H232187-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	tories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PIL	))		109 %	71.5	-134	3050419	JH	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			93.3 %	48.2	-134	3050331	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			102 %	49.1	-148	3050331	MS	04-May-23	8015B	

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### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Reported: 41 31-May-23 12:01

Project Number: 03C2012021 (32.06221-103.61441

Project Manager: HADLIE GREEN Fax To:

FS 40 1.0' H232187-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	48.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PIL	))		110 %	71.5	-134	3050419	ЈН	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			88.4 %	48.2	-134	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			83.7 %	49.1	-148	3050424	MS	04-May-23	8015B	

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## Analytical Results For:

**ENSOLUM** 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Project: MESA B WEST

Reported:

Project Number: 03C2012021 (32.06221-103.61441

31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 41 1.0' H232187-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Laborat	tories					
Inorganic Compounds										
Chloride	80.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compound	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (P.	ID)		105 %	71.5	-134	3050419	ЈН	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			99.2 %	48.2	-134	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			93.3 %	49.1	-148	3050424	MS	04-May-23	8015B	

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### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

FS 42 1.0' H232187-14 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Laborat	tories					
Inorganic Compounds										
Chloride	48.0		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compound	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050419	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050419	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050419	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (P	PID)		109 %	71.5	-134	3050419	JH	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			86.8 %	48.2	-134	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			84.7 %	49.1	-148	3050424	MS	04-May-23	8015B	

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### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 43 1.0' H232187-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	112		16.0	mg/kg	4	3050439	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds h	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050420	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050420	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050420	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050420	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050420	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			107 %	71.5	-134	3050420	ЈН	05-May-23	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			96.1 %	48.2	-134	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			90.4 %	49.1	-148	3050424	MS	04-May-23	8015B	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

# FS 44 1.0' H232187-16 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Laborat	tories					
Inorganic Compounds										
Chloride	80.0		16.0	mg/kg	4	3050440	AC	04-May-23	4500-Cl-B	
Volatile Organic Compound	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050420	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050420	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050420	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050420	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050420	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (P	PID)		108 %	71.5	-134	3050420	JH	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			84.4 %	48.2	-134	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			83.2 %	49.1	-148	3050424	MS	04-May-23	8015B	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



## Analytical Results For:

**ENSOLUM** 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Project: MESA B WEST

Reported:

Project Number: 03C2012021 (32.06221-103.61441

31-May-23 12:01

Project Manager: HADLIE GREEN

Fax To:

FS 14 1.0' H232187-17 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	3050440	AC	04-May-23	4500-Cl-B	
Volatile Organic Compounds	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3050420	JH	05-May-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3050420	JH	05-May-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3050420	JH	05-May-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3050420	JH	05-May-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3050420	JH	05-May-23	8021B	
Surrogate: 4-Bromofluorobenzene (Pl	(D)		110 %	71.5	-134	3050420	JH	05-May-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctane			97.8 %	48.2	-134	3050424	MS	04-May-23	8015B	
Surrogate: 1-Chlorooctadecane			95.9 %	49.1	-148	3050424	MS	04-May-23	8015B	

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### Analytical Results For:

**ENSOLUM** 3122 NATIONAL PARKS HWY

Project: MESA B WEST Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

CARLSBAD NM, 88220

Project Manager: HADLIE GREEN

Fax To:

## **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3050439 - 1:4 DI Water										
Blank (3050439-BLK1)				Prepared &	t Analyzed:	04-May-23	1			<u> </u>
Chloride	ND	16.0	mg/kg							
LCS (3050439-BS1)				Prepared &	k Analyzed:	04-May-23	1			
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (3050439-BSD1)				Prepared &	λ Analyzed:	04-May-23				
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	
Batch 3050440 - 1:4 DI Water										
Blank (3050440-BLK1)				Prepared &	k Analyzed:	04-May-23	1			
Chloride	ND	16.0	mg/kg							
LCS (3050440-BS1)				Prepared &	ά Analyzed:	04-May-23				
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (3050440-BSD1)				Prepared &	k Analyzed:	04-May-23	1			
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



%REC

## Analytical Results For:

**ENSOLUM** 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Project: MESA B WEST

Spike

Reported:

Reporting

0.050

0.150

0.300

Project Number: 03C2012021 (32.06221-103.61441

Source

31-May-23 12:01

RPD

Project Manager: HADLIE GREEN

Fax To:

### Volatile Organic Compounds by EPA Method 8021 - Quality Control

#### **Cardinal Laboratories**

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3050335 - Volatiles										
Blank (3050335-BLK1)				Prepared: (	03-May-23	Analyzed: (	)5-May-23			
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							

mg/kg

mg/kg

mg/kg

Surrogate: 4-Bromofluorobenzene (PID)	0.0513		mg/kg	0.0500	103	71.5-134
LCS (3050335-BS1)				Prepared: 03-M	lay-23 Analyzed: (	05-May-23
Benzene	1.88	0.050	mg/kg	2.00	93.8	81.4-118

ND

ND

ND

			0 0				
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	

Sim rogane. 7 Bromojimorovenizene (1 12)	0.0027		mg/kg	0.0200	100	71.0 107			
LCS Dup (3050335-BSD1)				Prepared: 03-Ma	ay-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	

71.5-134 Surrogate: 4-Bromofluorobenzene (PID) 0.0546 0.0500 109 mg/kg

### Batch 3050419 - Volatiles

Ethylbenzene

Total Xylenes

Total BTEX

Blank (3050419-BLK1)			Prepared: 04-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

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



%REC

## Analytical Results For:

**ENSOLUM** 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Project: MESA B WEST

Spike

Reported:

Reporting

Project Number: 03C2012021 (32.06221-103.61441

Source

31-May-23 12:01

RPD

Project Manager: HADLIE GREEN

Fax To:

### Volatile Organic Compounds by EPA Method 8021 - Quality Control

#### **Cardinal Laboratories**

Batch 3050419 - Volatiles										
Blank (3050419-BLK1)				Prepared: 0	4-May-23	Analyzed: (	)5-May-23			
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0536		mg/kg	0.0500		107	71.5-134			
LCS (3050419-BS1)				Prepared: 0	4-May-23	Analyzed: (	)5-May-23			
Benzene	1.91	0.050	mg/kg	2.00		95.6	81.4-118			
Toluene	1.96	0.050	mg/kg	2.00		98.1	88.7-121			
Ethylbenzene	2.13	0.050	mg/kg	2.00		107	86.1-120			
m,p-Xylene	4.16	0.100	mg/kg	4.00		104	88.2-124			
o-Xylene	2.06	0.050	mg/kg	2.00		103	84.9-118			
Total Xylenes	6.22	0.150	mg/kg	6.00		104	87.3-122			
Surrogate: 4-Bromofluorobenzene (PID)	0.0552		mg/kg	0.0500		110	71.5-134			
LCS Dup (3050419-BSD1)				Prepared: 0	4-May-23	Analyzed: (	)5-May-23			
Benzene	1.82	0.050	mg/kg	2.00		91.0	81.4-118	4.94	15.8	
Toluene	1.87	0.050	mg/kg	2.00		93.5	88.7-121	4.85	15.9	
Ethylbenzene	2.02	0.050	mg/kg	2.00		101	86.1-120	5.20	16	
m,p-Xylene	3.96	0.100	mg/kg	4.00		99.0	88.2-124	5.01	16.2	
o-Xylene	1.95	0.050	mg/kg	2.00		97.7	84.9-118	5.40	16.7	
Total Xylenes	5.91	0.150	mg/kg	6.00		98.5	87.3-122	5.14	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0530		mg/kg	0.0500		106	71.5-134			

## Batch 3050420 - Volatiles

Blank (3050420-BLK1)				Prepared: 04-May	y-23 Analyzed: (	)5-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)	0.0551		mg/kg	0.0500	110	71.5-134	

#### Cardinal Laboratories

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



%PEC

### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MESA B WEST

Snika

Project Number: 03C2012021 (32.06221-103.61441

Reported: 31-May-23 12:01

DDD

Project Manager: HADLIE GREEN

Fax To:

### Volatile Organic Compounds by EPA Method 8021 - Quality Control

#### **Cardinal Laboratories**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3050420 - Volatiles										
LCS (3050420-BS1)				Prepared: 0	)4-May-23	Analyzed: (	05-May-23			
Benzene	2.07	0.050	mg/kg	2.00		104	81.4-118			
Toluene	2.01	0.050	mg/kg	2.00		101	88.7-121			
Ethylbenzene	2.15	0.050	mg/kg	2.00		107	86.1-120			
m,p-Xylene	4.19	0.100	mg/kg	4.00		105	88.2-124			
o-Xylene	2.08	0.050	mg/kg	2.00		104	84.9-118			
Total Xylenes	6.27	0.150	mg/kg	6.00		105	87.3-122			
Surrogate: 4-Bromofluorobenzene (PID)	0.0517		mg/kg	0.0500		103	71.5-134			
LCS Dup (3050420-BSD1)				Prepared: (	04-May-23	Analyzed: (	05-May-23			
Benzene	2.11	0.050	mg/kg	2.00		105	81.4-118	1.59	15.8	
Toluene	2.08	0.050	mg/kg	2.00		104	88.7-121	3.29	15.9	
Ethylbenzene	2.27	0.050	mg/kg	2.00		114	86.1-120	5.60	16	
m,p-Xylene	4.45	0.100	mg/kg	4.00		111	88.2-124	6.13	16.2	
o-Xylene	2.22	0.050	mg/kg	2.00		111	84.9-118	6.38	16.7	
Total Xylenes	6.67	0.150	mg/kg	6.00		111	87.3-122	6.21	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0548		mg/kg	0.0500		110	71.5-134			

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Celeg D. Keine



%REC

Limits

RPD

### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Analyte

DRO >C10-C28

Total TPH C6-C28

Surrogate: 1-Chlorooctane

Surrogate: 1-Chlorooctadecane

Project: MESA B WEST

Spike

Level

Project Number: 03C2012021 (32.06221-103.61441

Source

Result

%REC

82.4

86.3

99.8

72.5-126

77.6-123

48.2-134

49.1-148

2.05

21

Reported: 31-May-23 12:01

RPD

Limit

Notes

Project Manager: HADLIE GREEN

Fax To:

### Petroleum Hydrocarbons by GC FID - Quality Control

#### **Cardinal Laboratories**

Units

Reporting

Limit

10.0

Result

165

345

42.7

49.9

Blank (3050331-BLK1)				Prepared: 03-Ma	y-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	40.1		mg/kg	49.6	80.8	48.2-134			
Surrogate: 1-Chlorooctadecane	44.3		mg/kg	50.0	88.6	49.1-148			
LCS (3050331-BS1)				Prepared: 03-Ma	y-23 Analyzed:	04-May-23			
GRO C6-C10	178	10.0	mg/kg	200	89.1	78.5-124			
DRO >C10-C28	161	10.0	mg/kg	200	80.7	72.5-126			
Total TPH C6-C28	340	10.0	mg/kg	400	84.9	77.6-123			
Surrogate: 1-Chlorooctane	42.7		mg/kg	49.6	86.2	48.2-134			
Surrogate: 1-Chlorooctadecane	49.8		mg/kg	50.0	99.5	49.1-148			
LCS Dup (3050331-BSD1)				Prepared: 03-Ma	y-23 Analyzed:	04-May-23			
GRO C6-C10	180	10.0	mg/kg	200	90.1	78.5-124	1.17	17.7	

## **Batch 3050424 - General Prep - Organics**

Blank (3050424-BLK1)	ank (3050424-BLK1) Prepared & 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	43.2		mg/kg	49.6	87.1	48.2-134
Surrogate: 1-Chlorooctadecane	42.0		mg/kg	50.0	83.9	49.1-148

mg/kg

mg/kg

mg/kg

mg/kg

200

400

49.6

50.0

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Celeg D. Keine



%REC

Limits

RPD

## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Analyte

Project: MESA B WEST

Spike

Level

Project Number: 03C2012021 (32.06221-103.61441

Source

Result

%REC

Reported: 31-May-23 12:01

RPD

Limit

Notes

Project Manager: HADLIE GREEN

Fax To:

#### Petroleum Hydrocarbons by GC FID - Quality Control

#### **Cardinal Laboratories**

Units

Reporting

Limit

Result

LCS (3050424-BS1)	Prepared & Analyzed: 04-May-23							
GRO C6-C10	188	10.0	mg/kg	200	93.8	78.5-124		
DRO >C10-C28	177	10.0	mg/kg	200	88.6	72.5-126		
Total TPH C6-C28	365	10.0	mg/kg	400	91.2	77.6-123		
Surrogate: 1-Chlorooctane	46.4		mg/kg	49.6	93.7	48.2-134		
Surrogate: 1-Chlorooctadecane	42.6		mg/kg	50.0	85.1	49.1-148		
LCS Dup (3050424-BSD1)				Prepared & Anal	yzed: 04-May-2	3		
GRO C6-C10	187	10.0	mg/kg	200	93.5	78.5-124	0.322	17.7
DRO >C10-C28	177	10.0	mg/kg	200	88.6	72.5-126	0.0124	21
Total TPH C6-C28	364	10.0	mg/kg	400	91.1	77.6-123	0.160	18.5
Surrogate: 1-Chlorooctane	45.9		mg/kg	49.6	92.7	48.2-134		
Surrogate: 1-Chlorooctadecane	42.3		mg/kg	50.0	84.5	49.1-148		

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Celey D. Keine



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

#### **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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Page 26 of 28

PM

Received by OCD: 7/19/2023

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Ensolum								BILL TO						_		_	_	A	NAL	YSIS	S R	EQU	IES	T	 	$\dashv$	
	: Hadlie Green							_	2.0.						1												
	ddress: 3122 National Parks Hwy							c	Company: BTA Oil Producers					5													
City: Car Spo	sta Sta	ate: NM	Zip	:8	823	20		1	Attn	: N	ath	lay	Si	rgo													
Phone #: 432	-557-8895 Fax	#:						1	Add	ress	:101	45	5. Peu	ys 54													
Project #: 03	C2012021 Proj	ject Owner	:						City	: M	lidlo	and	1														
	Mega B West							5	Stat	e:	X	Zip:	:79	701													
Project Location	:32.06221,-103	61441						F	Pho	ne #	#: 43	32-	-682	-3753													
Sampler Name:	Peter Van Patter	1						-	ax	#:					1												
FOR LAB USE ONLY				П		MA	TRIX		F	PRES	SERV.	7	SAME	LING	1												
Lab I.D.	Sample I.D.	- 6	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	OIL	SLUDGE	OTHER:	ACID/BASE:	OTHER:		DATE	TIME		BTEX	100										
	SWOZ	6'-3'	C	1		V			1		~	2.	-3-23			V	1		4				+	+	-		+
	F530	1.5'	C	1		V			1	- 1			3-23		V		-		-	_			+	-	_		+
3	FS31	1.5	C	1		V			-	- 3			3-23			1	~	/	+	$\dashv$		-	+	+			+
4	F\$3Z	1.5	C	1		V			-		V	2-	777	935	V	1	1	1	+	-		-	+	+			+
5	FS 33	1.5'	6	1		V			-	-		5	7.62	940		1	-	1	+			-		1			+
	FS34	1.5'	0	1					-	- 1		5	3-22	945	1	1		/	-				+	1			
7	FS35	1.0'	0	+		V	/		-1		/	5.	3-23	1030	V	1		1	1								
8	FS36	1.0'	6	1		V	-	H	1	-				1035		1	1	1									
1)	F537 FS38	(00	C	1		V	1		1	-	/	5-	3-23	1040	1	V	1										
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Relinquished By:	Date: 67-3-23	Received By:    Verbal Result:   Yes   No   Add'l Phone #:   All Results are emailed. Please provide Email address:	
Peter Vi Patt	Time: 1330	Mucha Manten Censolum.com, thorrissey wensounce	M
Relinquished By:	Date:	Reserved By: REMARKS: Pooler Temp Blank 1, lec	
	Time:		
Delivered By: (Circle One)	Observed Temp. °C	Cool Intact (Initials)	
Sampler - UPS - Bus - Other:	Corrected Temp. °C	Voc Voc	

Page 27 of 28

<sup>†</sup> Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Received by OCD: 7/19/2023

28

Page 28 of

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

O No.											BIL	LL TO						1	ANA	LYSI	5 K		E01			
	: Ensolum							-	.0.1		-41			T	$\top$	$\neg$										
Project Manager	r. Hadlie Green					-					7-	F1 0-1	DI	$\dashv$							ļ					
Address: 3(	22 National Park	5 He	7					C	om	pany	r: D	TA Oil	troduce	5							1					
cin Coddo	rod State:	NM Z	ip:	88	22	0		At	ttn:	Na	the	an Sil	190	-												
Phone #: 432	-557-8895 Fax#:											4 S. Pa	105 St													
Project #: 030	120170Z   Project	Owner:						С	ity:	M	idle	and	- 0:	-												
Droject Name:	Mosa B West							S	tate	e: \ /	Χ.	Zip: 79	701													
Project Location	n: 32,06221, -103-	6141	41					P	hor	ne #:	430	2-682-	3/5:	2				1								
Sampler Name:	Peter Van Patter	_		_		_		F	ax #		Total Control	/ 0411	IPLING	10	1											
FOR LAB USE ONLY						MAT	RIX		P	PRESE	ERV.	SAN	PLING	- 0	i l											
Lab I.D. HZ3 2187	Sample I.D.		(G)RAB OR (C)O	# CONTAINERS	WASTEWATER	SOIL	OIL	SLUDGE OTHER	ACID/BASE.	ACID/BASE:	OTHER:	DATE		E -	0 1	BLEX	HALL Y									
11	1927	1.0'	C	1	1	V		4	1	V		2.5.60			7	7	-	-	+-	+	+	+	-	_	+	
	F540	1.0	C	(		1			1	V			31050		1		~	-	+	+	+	+	-	+-	+	
13	FC 41	1.0'	C	1		V		_		V		5-3-73			1	7	7	-	+	+	+	-	-	1	+	+
14	FSHZ	1.0	C	1		V				~		9-3-23				-	V		+	-	+	_	-	-	+	+
15	FS 43	1.0'	0	1		V			$\perp$	~		5-3-23			7	~	1		+	-	+	-	+	+	1	
11.	F5 44	1.0'	C	1		1				V			1110		1	~	-	-	1	+-	+	-	+	+	1	
17	F545 14	1.0'	C	1		1				1	1	5-3-23	1115	,	1	~	-	-	-	+	+	+	+	+	1	
	X81 5130123													1									7-			

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 the client for the 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 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 incidental or consequental damages, including which initiation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, service. In no event shall Cardinal be liable for incidental or consequental damages, including which initiation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, service.

affiliates or successors arising out of or related to the per Relinquished By:	5-3-23	Received By:	7////A	Verbal Result: Yes Who Add'l Phone #:  NI Results are emailed. Please provide Email address:  A arean @ ensour, com two rissey Censoum.com
Relinquished By:	Time: 330 Date:	Received By:	depose !	REMARKS: (CUSTOMEN requested sample ID
	Time:	3 Sample Condition	CHECKED BY: To	Charles Standard Bacteria (only) Sample Condition
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C Corrected Temp. °C	Cool Intact	(Initigis)	Rush Cool Intact Observed Temp. °C  Thermometer ID #113 Correction Factor -0.6°C



APPENDIX E

**NMOCD Notifications** 

Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 03/13/2023

**Date:** Wednesday, March 8, 2023 5:17:29 PM

Attachments: image002.png

image003.png image004.png image005.png

### [ \*\*EXTERNAL EMAIL\*\*]

No problem! Thank you for the clarification.

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: Wednesday, March 8, 2023 4:17 PM

**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD

<Jennifer.Nobui@emnrd.nm.gov>

**Subject:** RE: [EXTERNAL] BTA - Sampling Notification - Week of 03/13/2023

Hi,

My apologies, I didn't change the week date in the text itself. These sampling activities are scheduled for next week, March 13, 2023.

Thank you,



#### **Hadlie Green**

Project Manager 432-557-8895 hgreen@ensolum.com Ensolum, LLC From: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

**Sent:** Wednesday, March 8, 2023 5:15 PM **To:** Hadlie Green <a href="mailto:hgreen@ensolum.com">hgreen@ensolum.com</a>>

**Cc:** Bratcher, Michael, EMNRD < <u>mike.bratcher@emnrd.nm.gov</u>>; Nobui, Jennifer, EMNRD

<Jennifer.Nobui@emnrd.nm.gov>

**Subject:** RE: [EXTERNAL] BTA - Sampling Notification - Week of 03/13/2023

#### [ \*\*EXTERNAL EMAIL\*\*]

Hadlie,

Please be aware that notification requirements are **two business days**, per rule. Were you intending on giving notification for next week 3/13/2023? This, and all correspondence, should be included in the closure report to insure inclusion in the project file.

JH

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 < <a href="mailto:hgreen@ensolum.com">hgreen@ensolum.com</a>>
Sent: Wednesday, March 8, 2023 1:48 PM

**To:** Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov >

**Cc:** Tacoma Morrissey < tmorrissey@ensolum.com >; Bob Hall < bhall@btaoil.com >

**Subject:** [EXTERNAL] BTA - Sampling Notification - Week of 03/13/2023

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 March 6, 2023.

- Mesa Dolphin Produced Water Poly Line/ nAPP2303736433
- Mesa B East NGL Water Transfer Line/ nAPP2235558643
- Mesa B West Burned Poly Line / nAPP2303737335

Thank you,

Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD

Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 04/03/2023

**Date:** Friday, March 31, 2023 10:08:11 AM

Attachments: <u>image005.jpg</u>

image006.png image007.png image008.png image009.png

### [ \*\*EXTERNAL EMAIL\*\*]

Hadlie,

Thank you for the notification. Please 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.

JH

#### 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 <a href="mailto:hgreen@ensolum.com">hgreen@ensolum.com</a>

To: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

**Sent:** Thursday, March 30, 2023 8:42 AM

Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Bob Hall <br/><br/>Bob Hall <br/>

Subject: [EXTERNAL] BTA - Sampling Notification - Week of 04/03/2023

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 location the week of April 3, 2023.

- Mesa B West Burned Water Transfer Poly Line / nAPP2303737335
  - Sampling Date: 4/5-7/2023 @ 8:00 AM MST

Thank you,

# **Hadlie Green**



Project Manager 432-557-8895 hgreen@ensolum.com Ensolum, LLC

Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD

Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 04/10/2023

**Date:** Thursday, April 6, 2023 2:00:40 PM

Attachments: <u>image005.jpg</u>

image006.png image007.png image008.png image009.png

### [ \*\*EXTERNAL EMAIL\*\*]

Hadlie,

Thank you for the notification. Please 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.

JH

#### 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 <a href="mailto:hgreen@ensolum.com">hgreen@ensolum.com</a>

Sent: Thursday, April 6, 2023 9:02 AM

**To:** Enviro, OCD, EMNRD < OCD.Enviro@emnrd.nm.gov>

Cc: Bob Hall <a href="mailto:bhall@btaoil.com">bhall@btaoil.com</a>; Tacoma Morrissey <a href="mailto:tmorrissey@ensolum.com">tmorrissey@ensolum.com</a>>

Subject: [EXTERNAL] BTA - Sampling Notification - Week of 04/10/2023

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 location the week of April 10, 2023.

- Mesa B West Burned Water Transfer Poly Line / nAPP2303737335
  - Sampling Date: 4/10-11/2023 @ 9:00 AM MST

Thank you,

## **Hadlie Green**



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

Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD

Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 04/17/2023

**Date:** Friday, April 14, 2023 10:36:22 AM

Attachments: <u>image005.jpg</u>

image006.png image007.png image008.png image009.png

#### [ \*\*EXTERNAL EMAIL\*\*]

Hadlie,

Thank you for the notification. Please 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 JH

#### 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, April 13, 2023 8:48 AM

To: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

Cc: Tacoma Morrissey <a href="mailto:tmorrissey@ensolum.com">tmorrissey@ensolum.com</a>; Bob Hall <a href="mailto:bhall@btaoil.com">bhall@btaoil.com</a>

Subject: [EXTERNAL] BTA - Sampling Notification - Week of 04/17/2023

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 location the week of April 17, 2023.

- Mesa B West Burned Water Transfer Poly Line / nAPP2303737335
  - Sampling Date: 4/17-18/2023 @ 9:00 AM MST
- Mesa B East NGL Water Transfer Line / nAPP2235558643
  - Sampling Date: 4/19-20/2023 @ 9:00 AM MST

Thank you,



## **Hadlie Green**

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

Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD

Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 04/24/2023

**Date:** Thursday, April 20, 2023 4:31:51 PM

Attachments: <u>image005.jpg</u>

image006.png image007.png image008.png image009.png

### [ \*\*EXTERNAL EMAIL\*\*]

Hadlie,

Please be aware that notification requirements are **two business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to insure inclusion in the project file.

JH

#### 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, April 20, 2023 2:30 PM

To: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Bob Hall <br/>bhall@btaoil.com>

Subject: [EXTERNAL] BTA - Sampling Notification - Week of 04/24/2023

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 location the week of April 17, 2023.

- Mesa B West Burned Water Transfer Poly Line / nAPP2303737335
  - Sampling Date: 4/24-26/2023 @ 9:00 AM MST
- Mesa B East NGL Water Transfer Line / nAPP2235558643

• Sampling Date: 4/25-26/2023 @ 9:00 AM MST

Thank you,



## **Hadlie Green**

Project Geologist 432-557-8895 hgreen@ensolum.com Ensolum, LLC From: Nobui, Jennifer, EMNRD

To: <u>Hadlie Green</u>

Cc: Bratcher, Michael, EMNRD; Harimon, Jocelyn, EMNRD; Hamlet, Robert, EMNRD

Subject: FW: [EXTERNAL] BTA - Extension Request - Mesa B West - Burned Water Transfer Poly Line (Incident Number

nAPP2303737335)

**Date:** Friday, April 28, 2023 3:36:57 PM

Attachments: <u>image001.png</u> <u>image002.png</u>

image002.png image003.png image004.png

## [ \*\*EXTERNAL EMAIL\*\*]

From: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

Sent: Friday, April 28, 2023 2:27 PM

Hello Hadlie,

OCD approves your 90-day extension request to August 4, 2023 to submit a remediation plan or closure report. Please 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.

Thanks,

Jennifer Nobui

From: Hadlie Green <a href="mailto:hgreen@ensolum.com">hgreen@ensolum.com</a>>

Sent: Thursday, April 27, 2023 12:10 PM

**To:** Enviro, OCD, EMNRD < < OCD. Enviro@emnrd.nm.gov >

**Cc:** Tacoma Morrissey < <a href="mailto:tmorrissey@ensolum.com">tmorrissey@ensolum.com</a>>; Bob Hall < <a href="mailto:bhall@btaoil.com">bhall@btaoil.com</a>>;

nsirgo@btaoil.com

**Subject:** [EXTERNAL] BTA - Extension Request - Mesa B West - Burned Water Transfer Poly Line (Incident Number nAPP2303737335)

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

All,

BTA is requesting an extension for the current deadline of May 6, 2023, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for Mesa B West – Burned Water Transfer Poly Line (Incident Number nAPP2303737335). The release was discovered on February 5, 2023. Initial site assessment activities have been completed and excavation activities are ongoing. In order to complete additional remediation activities and submit a remediation work plan or closure report, BTA requests a 90-day extension of this deadline until August 4, 2023.

Thank you,

# **Hadlie Green**

**Ensolum, LLC** 



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

Released to Imaging: 10/13/2023 2:04:56 PM



APPENDIX F

Final C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	nAPP2303737335
District RP	
Facility ID	fAPP2135655250
Application ID	

# **Release Notification**

## **Responsible Party**

Responsible Party: BTA Oil Producers, LLC	OGRID: 260297
Contact Name: Bob Hall	Contact Telephone: 432-682-3753
Contact email: bhall@btaoil.com	Incident # (assigned by OCD) nAPP2303737335
Contact mailing address: 104 S. Pecos St., Midland, TX 79701	

## **Location of Release Source**

Latitude: 32.06221 Longitude: -103.61441

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Mesa B West – Burned Water Transfer Poly Line					Site Type: Tank Batte	ery
Date Release Discovered: 2/5/2023					API# (if applicable) Nearest	well:
Unit Letter Section Township Range				County		

Unit Letter	Section	Township	Range	County
С	7	26S	33E	Lea

Surface Owner: [	State		☐ Tribal	Private (Name:)
------------------	-------	--	----------	-----------------

## Nature and Volume of Release

Material	(s) Released (Select all that apply and attach calculations or specific	justification for the volumes provided below)
Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls) 56 BBL	Volume Recovered (bbls) 1 BBL
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	⊠ Yes □ No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		
Gas feed line rupture	ed and caused a fire that burned the 8" poly li	ne used for water transfer.
Recovered 1 BW.		
(Spill Calculation Spreads	heet attached.)	
(op caroaration oproduct		

Received by OCD: 7/19/2023 3:05:16 PM Form C-141 State of New Mexico

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Page 2		

Oil Conservation Division

	Page 164 of 169
ncident ID	nAPP2303737335
District RP	
Facility ID	fAPP2135655250
Application ID	

Was this a major release as defined by	If YES, for what reason(s) does the responsible party consider this a major release?				
19.15.29.7(A) NMAC?	·				
⊠ Yes □ No	This release was the result of a fire.				
	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? by NOR filed on 2/6/2023 via the NMOCD Permitting Website.				
Notice was provided	by NOR filed on 2/6/2025 via the Nivioco Fermitting Website.				
	- A.A. A.T.				
	Initial Response				
The responsible	party must undertake the following actions immediately unless they could create a safety hazard that would result in injury				
☐ The source of the rele	nego hos boon stonned				
	as been secured to protect human health and the environment.				
_	ave been contained via the use of berms or dikes, absorbent pads, or other containment devices.				
	ecoverable materials have been removed and managed appropriately.				
	d above have not been undertaken, explain why:				
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.					
	ormation given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and				
regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.					
Printed Name: Bob Hall Title: Environmental Manager					
Signature: Bol Hall Date: 2/14/2023					
email: bhall@btaoil.com Telephone: 432-682-3753					
OCD O-l-					
OCD Only					
Received by:	Date:				



## **Release Volume Calculator**

This calculator estimates a spill volume based on the size and estimated saturation of the spill.

**Location/Site Name** Mesa B West Water Transfer Line

**GPS Coordinates** 32.06221,-103.61441 **Spill Date and Time** 2/5/2023

Instructions: Input the spill parameters (dimensions) in blue text, and the spreadsheet calculates a potential spill volume. Other parameters can be changed as appropriate.

Area 16,800 square feet
Saturation (or depth) 1.5 inches

Percent Hydrocarbon 0 % Hydrocarbon (0-100)
Porosity (choose one) 0.15

Saturated Soil Volume 77.78 cubic yards

Total Hydrocarbon (oil) 0.00 barrels

Types of Soil	Porosity Factor	
Sand		0.20
Clay		0.05
Clay/Silt-Sandy Mix		0.15
Caliche		0.03
Gravel		0.25
Unknown		0.25

Total Produced Water

Area Name (ft2)	Saturation Depth (in)	Total Oil (bbls)	Total Water (bbls)
Stained Area (16,800 sq ft	1.5	0	56.1
	Totals:	0	56.1

56.10 barrels

Total Volume Released: 56.1

Page 166 of 169

Incident ID	NAPP2303737335
District RP	
Facility ID	
Application ID	

# **Site Assessment/Characterization**

This information must be provided to the appropriate district office no taler than 90 days after the release discovery date.			
What is the shallowest depth to groundwater beneath the area affected by the release?	51-100 (ft bgs)		
Did this release impact groundwater or surface water?	☐ Yes ⊠ No		
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No		
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No		
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No		
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No		
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No		
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No		
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No		
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No		
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No		
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No		
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	⊠ Yes □ No		
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.			
Characterization Report Checklist: Each of the following items must be included in the report.			
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li> <li>Field data</li> <li>Data table of soil contaminant concentration data</li> <li>Depth to water determination</li> </ul>			

Characterization Report Checklist: Each of the following items must be included in the report.			
<u> </u>			
Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.			
Field data			
Data table of soil contaminant concentration data			
Depth to water determination			
Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release			
Boring or excavation logs			
Photographs including date and GIS information			
Topographic/Aerial maps			
Laboratory data including chain of custody			
<del>-</del>			

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

Received by OCD: 7/19/2023 3:05:16 PM Form C-141 State of New Mexico Oil Conservation Division Page 4

	Page 1	167 o	of 169
NAPP230	373733	35	

Incident ID	NAPP2303737335
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.			
Printed Name:Kelton Beaird	Title:Environmental Manager		
Signature:	Date:07/19/2023		
email:KBeaird@btaoil.com	Telephone:432-312-2203		
OCD Only			
Received by: Shelly Wells	Date: <u>7/20/2023</u>		

Received by OCD: 7/19/2023 3:05:16 PM Form C-141 State of New Mexico Page 6 Oil Conservation Division

Page 168 of 169
Incident ID NAPP2303737335
District RP
Facility ID
Application ID

# Closure

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

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.			
A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC		
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)			
☐ Laboratory analyses of final sampling (Note: appropriate ODC	C District office must be notified 2 days prior to final sampling)		
Description of remediation activities			
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of	tions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in CD when reclamation and re-vegetation are complete.  Title:Environmental Manager		
OCD Only			
Received by: _Shelly Wells	Date: <u>7/20/2023</u>		
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.		
Closure Approved by: Nelson Velez	Date: <u>10/13/2023</u>		
Printed Name: Nelson Velez			

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

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

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

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

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

CONDITIONS

Action 242264

#### **CONDITIONS**

Operator:	OGRID:
BTA OIL PRODUCERS, LLC	260297
104 S Pecos	Action Number:
Midland, TX 79701	242264
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
nvelez	None	10/13/2023